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ABSTRACT

Presented is a study of the career plans of women and minorities who indicated interest in science careers. The primary purpose of the study is to provide information about the characteristics of women and minorities who do, or do not, choose to pursue science careers. The objective of this study is to assess career intent in relation to home and school influences as well as to self assessments of skills and abilities, achievement, preferences, and aspirations. (Author)

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Supplementary

# REPORT OF POLL NO. 101 OF THE PURDUE OPINION PANEL

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# FACTORS INFLUENCING THE SCIENCE CAREER PLANS OF WOMEN AND MINORITIES

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Measurement and Research Center
Department of Freshman Engineering
Purdue University
West Lafayette, Indiana 47907

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# FACTORS INFLUENCING THE SCIENCE CAREER PLANS OF WOMEN AND MINORITIES

by

Arline C. Erlick

and

William K. LeBold

1977

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The Purdue Opinion Panel,
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Department of Freshman Engineering,

Purdue University
West Lafayette, Indiana 47907

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The late Dr. H. H. Remmers first proposed the Purdue Opinion Panel of American Youth in 1941. During the past 35 years, it has provided a rich and continuing documentation of the ever changing values of society. Since it is likely that this will be the last Purdue Opinion Panel report in the forseeable future, it is with some nostalgia and considerable feeling that the writers dedicate this report to the late Dr. Remmers and his students who have contributed so much.

Factors Influencing the Science Career Plans of Women and Minorities

Arline C. Erlick, Indiana Advisory Council for Vocational Education

and

William K. LeBold, Purdue University

Abstract

This is a study of the career plans of women and minorities who indicated interest in science careers. The primary purpose of the study is to provide information about the characteristics of women and minorities who do, or do not, choose to pursue science careers. The objective of this study is to assess career intent in relation to home and school influences as well as to self assessments of skills and abilities, achievement, preferences, and aspirations.

The subjects were the total sample of respondents (N = 8,621) to a 1975 Purdue Opinion Panel nationwide survey of secondary school students. Subgroups examined indicated that men are more likely to expect to have careers in physical science, but women to have careers in the humanities and life sciences, especially nursing. Non-white respondents who had given consideration to a career in science, mathematics, or engineering often lacked the courses and experiences which the majority white groups had in school and at home.

Results of the study showed that able, capable, achieving women are attracted to science or mathematics careers. If the school and family climate is supportive, and if students have considered and have been encouraged to consider science careers, they are more likely to do so. Many high school women and minorities, however, appear to lack the experiences, success and information necessary to enable them to seriously consider science careers. A quarter to a third of the respondents interested in being a scientist indicated that they could not do so for academic reasons, e.g., lack of required courses, poor grades, etc. and a third because they had made "other career choices". Many high school students lack understanding of science and the requisite mathematics and science preparation.

Females and minorities interested in science careers showed more similarities to male peers in interests and achievements. However, males have more technical experiences in school, e.g., shop courses and mechanical drawing, and out of school, e.g., working with power tools and reading Popular Mechanics which females and minorities lack. Women planning careers in science are more likely to plan to marry later and to combine marriage and career than are women not planning science careers.

# Factors Influencing the Science Career Plans of Women and Minorities

Arline C. Erlick, Indiana Advisory Council for Vocational Education

and

William K. LeBold, Purdue University

## I. Narrative

### Problem

A disproportionate number of qualified women and ethnic minority group members do not choose to pursue careers in science.[1] There is a need to identify the barriers to full participation in science careers and to remove them. Information that would help to identify and to understand the barriers to full participation of all individuals could be useful in making decisions about the retention or modification of present counseling, instruction or supplemental programs and activities, and the possible need for additions in these areas so that women and ethnic minority group members could reach their potential growth in career development.

### Purpose and Objectives of the Study

The primary purpose of this study was to provide information on the reasons why more women and minority group members do not choose to study science. The focus of the study was an investigation of the relationships, if any, between occupational choices, school subjects, and skills or abilities, especially in the area of mathematics and science. The methods used included (1) the analyses of existing relevant data from past Purdue Opinion Panel studies, and (2) the initiation of a new study to collect and analyze important but non-existing data. Attention was given to the opportunity for exposure to

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[1] The word "science" is used as a general term referring to the following disciplines: the mathematical, physical, biological, medical (but not clinical), engineering, and social sciences, and the history and philosophy of science; also included are interdisciplinary fields which comprise overlapping areas of two or more sciences, e.g., biophysics, geochemistry, meterology, and oceanography.

innovative science curricula, e.g., Biological Science Curriculum Study, etc., and an examination of the possible relationships to occupational choices and attitudes toward science issues. For the new study, a special questionnaire, Poll 101, was developed.

The outcomes of the national representative sample for Poll 101 (N = 2000) were supplemented by examination of the total sample of all respondents to Poll 101, so that more analytic tests could be conducted. For instance, the total sample of all respondents to Poll 101 (N = 8,621 usable questionnaires) was sufficiently large so that all or most of the selected permutations of the classifications could be examined for hypotheses about subsample membership. To use representative national samples in this manner would require equally large sizes to perform satisfactorily the same analyses. The cost of obtaining national samples of such enormous size would be prohibitive.

The researchers compared responses of the national sample and the total respondents to Poll 101 and found close approximation of the results. The reader interested in comparisons of these groups can refer to the report on the national sample results (Erlick & LeBold, 1975) and to the Appendix B of this report.

The practical outcome of the procedure adopted in this study was to obtain additional evidence about the characteristics of individual occupational families so that knowledge and understanding of the paths toward these goals could become evident. Information obtained from analyses of the national sample for Poll 101 (Erlick & LeBold, 1975) is supplemented by this report which includes information obtained from analyses of the total sample of all respondents to Poll 101 and a recent American Physical Science paper (LeBold, 1976).

The objectives of this study were: (1) to compare responses of subgroups inclined toward science careers with each other and with those of respondents-

in-general, and (2) to relate present school experiences to future educational and career aspirations.

The administration of Poll 101 provided information on several topics:[2]

1. School subjects
    a. those taken
    b. attitudes toward
2. Teacher behaviors
3. Innovative science programs
4. Educational levels
    a. parents'
    b. students' expectations
5. Self-concepts
    a. skills and abilities
    b. activities and achievements
6. Science orientation
    a. career choices
    b. job family preferences
    c. consideration given toward entering
7. Work preferences
    a. parents' for children
    b. students' own
8. Attitudes
    a. toward sex roles
    b. toward or away from science

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[2] See Appendix B for individual responses to all items.

Several questions were raised in this study:

1. What are the effects of stimuli from school courses on career decisions in science areas?

2. What are the conditions which produce differential points of view with regard to science careers among various groups, e.g., females and minority group members? Conditions to be examined are those within the school, within the family, and within the student.

3. Are there interactions between attitudes toward science as a career and/or behavior patterns which occur simultaneously?

In the present study, a stringent guide was used to assess results from existing studies. Response differences were examined for deviations greater than ten percent in order to report genuine differences ($p < .001$ in most instances) rather than to risk reporting sample biases as differences. Unless otherwise reported, differences in sex and ethnic responses will be reported only in instances where deviations of at least ten percent occurred.[3]

School Information

School personnel in the Purdue Opinion Panel were asked to respond to a questionnaire seeking information about the nature of special programs in science areas. Information sought concerned the names of science programs, grades covered, and length of time the programs had been in operation. The following subject areas were examined: mathematics, physics, chemistry, biology, English. The returns from schools were reviewed to ascertain the extent to which potential student participants had opportunity to be exposed to innovative science programs.

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[3] See Appendix A for details of procedures.

Schools were also asked to provide information about the ethnic make-up of the school, information similar to that provided to the Office for Civil Rights (1972). The information obtained was helpful in insuring the participation of minority groups in responding to the student questionnaire. Comparisons were made between the school's description of the ethnic make-up and respondents' own description of ethnic origin. School-by-school comparisons were made to verify similarity of the proportions.

## II. Results

### School Subjects

Past Purdue Opinion Panel studies have shown attitudes of high school students to be generally favorable toward mathematics and science courses. In 1961 (Poll 63), over seven out of ten respondents reported that they liked the high school subjects of mathematics and science, equally as many who liked English and history or social studies. Fewer than one out of five respondents reported that mathematics and science courses were boring (Poll 66, 1962). (See Table 1.)

About seven out of ten respondents to Poll 66 (1962) reported that they had taken or wished to take mathematics and science courses. There were no sex differences in intent to take mathematics and science courses nor in the extent of hard work expended on the courses. Males exceeded females in reports that mathematics and science courses were very interesting and enjoyable as well as having potential to be helpful to adults in enjoying life.

In 1975 (Poll 101), about eight out of ten respondents reported that they had taken or will take algebra and biology. About half of the respondents had taken or planned to take plane geometry while more than a third had taken or planned to take chemistry. Only in the advanced courses, trigonometry and physics, did males outnumber females in course preparations.

Table 1

Attitudes Toward Mathematics and Science Courses[4]

| Issues | Mathematics | | Science | |
|---|---|---|---|---|
| | Males | Females | Males | Females |
| Courses taken or wish to take | 73 | 68 | 70 | 65 |
| To earn a living: | | | | |
| Especially useful | 55 | 38 | 39 | 24 |
| Not useful | 6 | 8 | 12 | 19 |
| Attitudes toward courses: | | | | |
| A. Enjoyed taking | 32 | 22 | 32 | 22 |
| Did not enjoy taking | 21 | 29 | 15 | 24 |
| B. Very interesting | 30 | 20 | 40 | 28 |
| C. Worked very hard | 38 | 35 | 30 | 29 |
| Did little work | 15 | 13 | 14 | 14 |
| D. Are boring | 18 | 20 | 14 | 22 |
| To enjoy life: | | | | |
| Will help | 19 | 9 | 26 | 12 |
| Will not help | 12 | 16 | 13 | 16 |

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[4] Blumenfeld, W. S., Franklin, R. D., & Remmers, H. H. Youth's attitudes toward sports, the Peace Corps, military service, and course offerings. Report of Poll 66, The Purdue Opinion Panel, Purdue University, 1962, 21(3).

Note: All data are percentages of responses. Responses may not total 100% in some instances due to rounding errors, omissions or multiple responses.

That group of science-leaning non-white respondents to Poll 101[5] resembled the total respondents to Poll 101 in having taken, or in plans to take, mathematics and science courses. These non-white females did, however, exceed females-in-general[6] in having taken biology and chemistry.

Respondents Selecting Science Careers

Respondents to Poll 101 selected from a list of 138 types the one occupation closest to that expected in future employment. Respondents to Poll 101 who selected one of the science careers[7] were isolated for future examination. Males and females in the science career choice group (SCCG) differed (by 10% or more) from male and female respondents-in-general in course grades, in self-perceptions of abilities and skills, and in attitudes toward mathematics and science courses. This group had a higher proportion of respondents (a) whose grades were above average or higher, (b) whose ratings of academic ability and mathematics abilities were above average, (c) whose ratings of problem solving skills were above average, and (d) who like the following subjects: algebra, plane geometry, trigonometry, chemistry, and physics. These respondents were also more likely to have participated in honors or advanced placement programs than were respondents-in-general.

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5 Science-leaning non-white respondents: those who responded "yes" to Item 34 in Poll 101 that they had given consideration to a career in science, mathematics, or engineering.

6 Females-in-general: all females in the total respondent group to Poll 101.

7 Science careers: architect, chemist, engineer (n.e.c., aerospace, chemical, civil/hydraulic, electrical/electronic, mechanical/automotive), geologist, mathematician/statistician, college mathematics teacher, physical scientist (n.e.c.), college science teacher, biologist/zoologist, dentist, pharmacist, physician, veterinarian, economist, psychologist, social scientist.

The four high school subjects taken most frequently by all respondents to Poll 101 were: English, social studies, algebra and biology (Item 12).[8] These subjects were also among the five subjects liked by most of the respondents to Poll 101.

In comparison to respondents-in-general to Poll 101, those who selected science occupations (SCCG) were the most likely to have taken advanced mathematics and science courses such as plane geometry, trigonometry, chemistry and physics. (See Table 2.) Liking for these subjects was also most widespread in the SCCG. Females in the SCCG were less likely than were females-in-general to like home economics and bookkeeping. Liking for mechanical drawing was more widespread among the SCCG males but was also slightly greater among the SCCG females than among female respondents-in-general.

Sex differences were noted for attitudes toward some school subjects with similarities between the respondents in the SCCG and respondents-in-general to Poll 101. Female SCCG respondents were more likely than were their male peers to have taken typewriting, home economics and bookkeeping, while male SCCG respondents were more likely to have taken mechanical drawing and auto mechanics. In addition, trigonometry was taken or will be taken by more SCCG males (58%) than by their female peers (47%). The incidence of taking trigonometry was two times greater among males and females in the SCCG compared with male and female respondents-in-general. Female SCCG respondents were also more likely to like English, typewriting and home economics while their male peers were more likely to like mechanical drawing and auto mechanics. In addition, SCCG males were more likely than their female peers to like chemistry and physics. The SCCG males and females were, however, more likely to like chemistry and physics than were respondents-in-general.

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[8] All items referred to in the text can be found in Appendix B.

Table 2

Percentage of School Subjects Taken or Plan to Take and Liked by Respondents in General and Those Expecting to Have Science Careers[9]

| | Taken or Will Take | | | | | | Like Subjects | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Resp. | | | Sci. Careers | | | Total Resp. | | | Sci. Careers | | |
| Subjects | Total | M | F | Total | M | F | Total | M | F | Total | M | F |
| English | 96 | 95 | 98 | 99 | 98 | 99 | 67 | 54 | 79 | 65 | 56 | 79 |
| Social Studies | 92 | 90 | 93 | 95 | 95 | 96 | 63 | 61 | 65 | 67 | 67 | 68 |
| Algebra | 80 | 81 | 80 | 93 | 94 | 94 | 51 | 51 | 51 | 70 | 71 | 68 |
| Biology | 79 | 78 | 81 | 87 | 86 | 88 | 61 | 59 | 64 | 70 | 68 | 73 |
| Plane Geometry | 51 | 54 | 49 | 76 | 77 | 75 | 31 | 35 | 27 | 53 | 56 | 49 |
| Typewriting | 76 | 61 | 88 | 72 | 63 | 87 | 55 | 39 | 70 | 47 | 38 | 61 |
| Chemistry | 39 | 42 | 36 | 64 | 66 | 62 | 26 | 29 | 22 | 44 | 48 | 37 |
| Trigonometry | 27 | 32 | 23 | 53 | 58 | 47 | 16 | 20 | 13 | 37 | 40 | 31 |
| Art | 51 | 48 | 54 | 50 | 48 | 51 | 49 | 43 | 54 | 50 | 47 | 54 |
| Physics | 25 | 31 | 21 | 47 | 52 | 41 | 16 | 20 | 13 | 33 | 37 | 27 |
| Home Economics | 51 | 23 | 78 | 37 | 17 | 67 | 44 | 21 | 65 | 33 | 18 | 55 |
| Mechanical Drawing | 26 | 44 | 9 | 35 | 50 | 12 | 26 | 40 | 13 | 37 | 50 | 18 |
| Band, Orchestra | 30 | 29 | 32 | 33 | 33 | 33 | 28 | 24 | 32 | 31 | 28 | 35 |
| Auto Mechanics | 20 | 32 | 8 | 19 | 26 | 8 | 27 | 41 | 13 | 27 | 37 | 13 |
| Bookkeeping | 30 | 21 | 39 | 20 | 16 | 27 | 25 | 17 | 32 | 17 | 15 | 20 |

[9] Data obtained from all respondents to Poll 101.

Non-white respondents to Poll 101 who indicated that they had considered science careers (Item 34) tended to resemble closely respondents-in-general in access to, and in attitudes toward, high school subjects. Non-white science-leaning respondents were less inclined to like algebra, plane geometry, and trigonometry than were the SCCG although there were no differences between these groups in attitudes toward biology. Non-white males were less inclined than were males in the SCCG to like chemistry, physics or mechanical drawing.

Teacher Behaviors

In Poll 101, responses were obtained from twelve statements (Item 37) about different kinds of teacher behaviors in the classroom. Nearly six out of ten (59%) respondents-in-general reported that most of their high school teachers do encourage students to consider education and/or training beyond high school. Nearly a third (32%) also reported that their teachers do encourage students to explore many choices for post high school plans. Few (9%) reported that teachers tell students that science course work is difficult. No differences on the three issues were noted between respondents-in-general and those in the SCCG, or non-white respondents who had given consideration to science careers.

Among respondents to Poll 101 who selected science careers (SCCG), there were no significant differences between responses of males and females for any of the twelve teacher behaviors.

Non-white respondents to Poll 101 who had given consideration to science careers differed from respondents-in-general and/or the SCCG in reports of teacher behaviors. This non-white group was more likely (39%) to be told by teachers which jobs offer the best opportunities for males and females than was the SCCG (22%). The non-white group, especially females (46%), was also more likely to be given advice by teachers on what to do after high school than were SCCG females (30%).

One interesting finding was that non-white science-leaning females (67%) were the most likely to report that their teachers encourage students to be creative and original, more so than were their male peers (48%), or SCCG females (56%). Non-white science-leaning females were also more likely than were SCCG females (27%:13%) to be told by teachers in which courses males and females can expect to be most successful.

Males who selected science occupations and non-white females who had considered science careers were more likely than their peers to report the opportunity to talk individually with their teachers. On the other hand, SCCG females (24%) were slightly less likely than were their male peers (31%), or the non-white science-leaning group (29%), to report encouragement to take mathematics courses. Non-white science-leaning males (36%) were less likely than were their female peers (52%), and the SCCG (51%), to report encouragement from teachers to build basic skills.

Innovative Science Programs

Table 3 presents an estimate of exposure to innovative science programs (Item 5) by student report with comparisons of groups choosing science occupations and non-white respondents who had considered science careers. There were no significant differences among these groups in exposure to the programs. It is evident, however, that exposure to SMSG was greater for the non-white group while exposure to IPS was greater for the SCCG. Females apparently had less access to ECCP and HPP, although there were no sex differences in exposure to HPP in the SCCG.

Educational Levels

Comparisons were made between students' reports of parents' present levels of education and students' own aspirations for future education (see Table 4). These results show that parents' level of education is highest for respondents in the SCCG and lowest for respondents-in-general to Poll 101, with high student aspirations for total education.

Table 3

Estimates of Exposure to Innovative Science Programs

| Have you ever used any of these materials in your science courses? (Mark as many as apply) | All respondents | | | Science Career Choices[10] | | | Non-white Science-leaning[10] | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | M | F | Total | M | F | Total | M | F |
| School Math Study Group (SMSG) | 8 | 9 | 7 | 6 | 7 | 5 | 14 | 14 | 14 |
| Physical Science Study Committee (PSSC) | 6 | 7 | 6 | 7 | 9 | 4 | 9 | 12 | 5 |
| Chemical Education Material Study (CHEMS) | 8 | 9 | 6 | 11 | 13 | 9 | 11 | 12 | 10 |
| Biological Science Curriculum (BSCS) | 29 | 29 | 29 | 30 | 30 | 31 | 33 | 33 | 33 |
| Harvard Project Physics (HPP) | 2 | 3 | 1 | 4 | 4 | 4 | 3 | 4 | 1 |
| Engineering Concepts Curriculum (ECCP) | 1 | 2 | 0 | 2 | 2 | 1 | 3 | 4 | 1 |
| Introductory Physical Science (IPS) | 19 | 20 | 18 | 22 | 23 | 20 | 16 | 14 | 17 |
| Intermediate Science Curriculum Study (ISCS) | 7 | 7 | 6 | 6 | 8 | 4 | 6 | 8 | 4 |

[10] See Appendix B for definitions.

Table 4

Comparisons of Students' Educational

Expectations by Parents' Level of Education

| Highest Level of Education | All respondents | | | Science Career Choices | | | Non-white Science-leaning | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | M | F | Total | M | F | Total | M | F |
| Father: | | | | | | | | | |
| High school graduate or less | 57 | 58 | 57 | 42 | 44 | 39 | 64 | 65 | 64 |
| Vocational, business or apprentice training, military service | 15 | 13 | 16 | 14 | 12 | 16 | 11 | 12 | 11 |
| Community college, 1 to 3 years of college | 9 | 9 | 9 | 13 | 12 | 14 | 7 | 7 | 7 |
| College graduate or higher | 18 | 19 | 18 | 32 | 31 | 31 | 17 | 16 | 17 |
| Mother: | | | | | | | | | |
| High school graduate or less | 67 | 66 | 67 | 56 | 56 | 57 | 70 | 73 | 68 |
| Vocational, business or apprentice training, military service | 8 | 7 | 9 | 10 | 9 | 10 | 6 | 6 | 5 |
| Community college, 1 to 3 years of college | 11 | 11 | 11 | 11 | 12 | 10 | 10 | 9 | 10 |
| College graduate or higher | 13 | 14 | 12 | 22 | 22 | 21 | 14 | 13 | 15 |
| Self: | | | | | | | | | |
| High school graduate or less | 20 | 18 | 22 | 6 | 6 | 8 | 11 | 13 | 9 |
| Vocational, business or apprentice training, military service | 19 | 21 | 18 | 9 | 9 | 8 | 17 | 19 | 15 |
| Community college, 1 to 3 years of college | 15 | 12 | 18 | 9 | 8 | 11 | 13 | 11 | 16 |
| College graduate or higher | 42 | 45 | 39 | 73 | 73 | 73 | 55 | 53 | 58 |

For non-white science-leaning respondents to Poll 101, parents' educational levels resembled that of parents of respondents-in-general. Fewer in the non-white group had parents who had completed post high school vocational or higher education (ratio 3:2 or higher). Nearly two thirds of the parents (64%) of non-white science-leaning respondents had high school, or less than high school education.

The evidence in Table 4 is clear that most respondents to Poll 101 aspire to higher educational levels than their parents have achieved. This is especially true for the SCCG where three out of four (73%) expect to complete four or more years of college compared with about one out of three (32%) of the fathers and one out of five (22%) of the mothers who have done so. However, educational aspirations are also high for the non-white science-leaning group where more than half (55%) aspire to four or more years of college compared with about one out of six (17%) of the fathers and about one out of seven (14%) of the mothers who had done so.

Self-Concepts

Estimates of self-concepts were obtained in Poll 101 by self-assessments of several attributes (Item 11). In Table 5, the attributes are ranked in order of their selection by the SCCG.

In self-perceptions of personal characteristics, a third of the respondents to Poll 101 reported academic ability at the "above average" level with no sex differences for respondents-in-general nor for science-leaning non-white respondents. There were sex differences, however, in reports of mathematics, problem solving and science abilities. About three out of ten male respondents-in-general reported mathematics and problem solving abilities at the above average levels while only about two out of ten of the females did so. Scientific ability received lower ratings for both sexes with one male in four or five and one female in seven or eight reporting above average levels.

Table 5

Self Ratings of Abilities and Skills

| | Above Average Ratings | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | All respondents | | | Science career choices | | | Non-white Science-leaning | | |
| Characteristics | Total | M | F | Total | M | F | Total | M | F |
| Academic ability | 34 | 33 | 34 | 54 | 54 | 54 | 35 | 34 | 36 |
| Drive to achieve | 42 | 41 | 42 | 51 | 50 | 54 | 52 | 51 | 53 |
| Mathematical ability | 26 | 30 | 22 | 46 | 47 | 45 | 30 | 34 | 24 |
| Problem solving ability | 25 | 29 | 21 | 44 | 47 | 38 | 29 | 31 | 26 |
| Athletic ability | 33 | 41 | 25 | 38 | 44 | 28 | 40 | 50 | 25 |
| Scientific ability | 17 | 22 | 13 | 36 | 40 | 30 | 23 | 23 | 24 |
| Speaking ability | 26 | 24 | 27 | 30 | 29 | 31 | 32 | 30 | 35 |
| Social skills | 26 | 23 | 29 | 29 | 26 | 33 | 29 | 27 | 31 |
| Mechanical ability | 18 | 30 | 6 | 26 | 35 | 13 | 21 | 31 | 8 |
| Artistic ability | 19 | 18 | 19 | 20 | 19 | 23 | 21 | 22 | 20 |

Similar sex ratios were found for science-leaning non-white respondents except that about a third of these males and a fourth of these females reported high mathematical abilities; about a fourth of these females reported high problem solving abilities. No sex differences were found for non-white science-leaning respondents in reports of scientific abilities.

For the SCCG as well as for respondents-in-general, the two highest ranked attributes were self-assessments of academic ability and drive to achieve. Drive to achieve was ranked equally high among the SCCG and the non-white science-leaning group with no evidence of sex differences for respondents in the two groups.

The SCCG assigned higher ranks for mathematical, problem solving and scientific abilities than did members of the non-white science-leaning group, and respondents-in-general.

No sex differences by subgroups were noted in ranks for academic ability, drive to achieve, speaking and artistic abilities. In general, a tendency was found for males to assign higher ratings for athletic, mechanical and problem solving abilities, but for females to assign higher ratings for social abilities. No sex differences were found for the ratings of mathematical ability by the SCCG nor for the ratings of scientific ability by the non-white science-leaning group. Males in the non-white science-leaning group and males-in-general tended to give higher ratings to mathematical ability than did their female peers. Higher ratings were found for males in the SCCG and males-in-general for scientific ability than for their female peers.

Non-white science-leaning respondents to Poll 101 resembled respondents-in-general in self-assessments of most of the ten characteristics offered. In three instances, however, non-white science-leaning females differed by 10% or more from females-in-general. Non-white females interested in science rated their scientific ability above average by a ratio of nearly two to one (24%:13%)

over females-in-general. There were no significant differences between non-white science-leaning males, white males-in-general, and non-white science-leaning females in ratings of scientific ability at the above average levels. Non-white science-leaning females' attitudes toward the subjects biology and chemistry were more positive than were the attitudes of females-in-general towards these subjects. The proportion of non-white science-leaning females who liked biology was greater than that for non-white science-leaning males; however, there were no sex differences for non-white respondents in attitudes toward chemistry.

Science-leaning vs. Non-science-leaning Students

In this study, a comparison was made of the total sample of respondents to Poll 101, with subgroups who indicated interest in job family preferences or occupational choices in the physical or life sciences, or in humanities including the behavioral sciences. Two target groups were closely examined: (1) respondents who selected one in a list of science occupations for future employment (SCCG), and (2) non-white respondents who reported having given consideration to future careers in science, mathematics or engineering. (See Appendix B for the composition of these subgroups.) By use of the total sample of respondents to Poll 101, the division into subgroups of interest yielded over one hundred individuals each so that many comparisons could be made.

When compared with respondents-in-general to Poll 101, science-leaning respondents reported: (1) higher academic achievement, (2) positive self-assessments of skills and abilities, and (3) parents having more post high school education or training.

Respondents selecting science careers differed little from respondents-in-general in several types of accomplishments offered (Item 14). There was little or no difference between the sexes or between the SCCG and the total group of respondents in any of the following: (1) having had a major part in a play,

(2) participation in a state or regional music contest, (3) winning a prize or award in an art competition, and (4) receiving a high rating in a state or regional music contest. Although differences fell below the level accepted in this study (10%), there was a greater tendency for respondents selecting science careers to differ from respondents-in-general in having entered a project in a science fair (males +7%; females +6%). The SCCG also showed a greater tendency to achieve recognition for mathematics (males +5%; females +6%).

Similar sex differences were found in the SCCG as in respondents-in-general in several accomplishments. Females in both groups were more likely than males to have: (1) achieved recognition for a 4-H project, (2) edited a school publication, and (3) become a member of a scholastic honor society. Males were more likely than females to have been an active participant in scouting.

The home possessions (Item 13) of mechanics tool kits and sewing machines yielded little differentiation among respondents to Poll 101. Yet non-white science-leaning respondents were the most likely to report having a ham radio while humanities-leaning males were the least likely to do so.

Females interested in physical science careers reported having power tools such as saws and drills to a greater extent than did females-in-general or females interested in humanities careers. No sex differences were found among physical science-leaning respondents who reported having power tools. Non-white science-leaning respondents, especially females, were less likely than were respondents-in-general to report having power tools in the home.

Pocket or desk calculators were more prevalent among physical science-leaning females and humanities-leaning males than among respondents-in-general. Calculators were about equally prevalent among the SCCG, the physical science occupations group and males in the life sciences and humanities. Calculators were the least prevalent among the non-white science-leaning group.

The possession of a large library differentiated science-leaning respondents to Poll 101 from respondents-in-general. Compared to respondents-in-general, science-leaning respondents were the most likely to have in their homes a library containing more than 250 books. Males inclined toward physical science occupations were less likely than other respondents inclined toward science occupations to report large home libraries.

A series of twelve activities (Item 15) adapted from Holland's (1965) personality types and range of competencies were offered in Poll 101. Reports were based upon those activities which respondents can do reasonably well. Compared with respondents-in-general, the SCCG is more skilled in each of the following: (1) interpreting simple chemical formulae, (2) describing the function of the blood stream, (3) using logarithmic tables, and (4) using a microscope.

There were no sex differences in reports of skills in the use of a microscope and in the description of the function of the blood stream except that humanities-leaning males tended to outnumber humanities-leaning females[10] in both skills. Sex differences were evident for the eight remaining activities for the SCCG as well as for respondents-in-general. Males outnumbered females (ratios 9:7 to 6:1) in the SCCG in all of the following: (1) using a voltmeter (38%:6%), (2) making mechanical drawings (48%:9%), (3) using wood shop power tools (73%:18%), (4) using a slide rule (53%:35%), (5) interpreting simple chemical formulae (57%:42%), and (6) using logarithmic tables (36%:25%). On the other hand, females outnumbered males in this group in all of the following: (1) designing clothing, posters, furniture, etc., (51%:25%), (2) making handicrafts, e.g., weaving, carving, pottery, leather tooling, etc., (65%:41%), (3) typing 40 words a minute (45%:28%), and (4) playing a musical instrument (55%:43%).

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[10] See Appendix B for definition.

Females inclined toward the physical sciences differed from females-in-general as well as from females inclined toward the life sciences or humanities in greater tendency to report skill in making mechanical drawings (ratio about 3:1), although females inclined toward physical science differed from their male peers by the same ratio. Physical science inclined females were also the least likely of the female respondents to Poll 101 to report competency in typing.

Non-white science-leaning respondents to Poll 101 resembled respondents-in-general in reporting skills with one exception. Non-white males in the group reported skill in using a slide rule nearly equal to that of males in the SCCG.

Respondents to Poll 101 inclined toward the sciences apparently were more active leisure readers over a broad range of content than were respondents-in-general. Science-leaning respondents exceeded respondents-in-general in reports that one or more magazines or books had been read during the past year in each of these groups (Item 36): (1) Popular Science, Psychology Today (42%:24%), (2) science fiction other than comic books (46%: 33%), and (3) other kinds of fiction (57%:48%). Respondents inclined toward physical science occupations were more likely to have read Popular Mechanics and/or Mechanics Illustrated than were respondents-in-general. Although males inclined toward physical science outnumbered their female peers in reading mechanics content, females in the group were nearly twice as likely as were females-in-general (21%:11%) to have read these mechanics publications. On the other hand, publications concerned with social-political or cultural problems were most likely to have been read by humanities inclined respondents as well as by females inclined toward the physical sciences.

Several questions were included in Poll 101 to assess the nature of the school climate. Among respondents in the SCCG, more than half reported that most of their high school teachers do the following: (1) encourage students to consider education and/or training beyond high school (59%), (2) encourage students to be creative and original (57%), and (3) encourage students to build basic skills (51%). About a third or more of the SCCG reported that most of their teachers do the following: (4) offer frequent opportunity to talk with teachers individually (38%), (5) give students advice on what to do after high school (34%), and (6) encourage students to explore many choices for post high school plans (33%). No sex differences were found among SCCG respondents for any of the above except that males in this group were somewhat more likely to be given advice by teachers on post high school plans (males 37%; females 30%). SCCG males were more likely than were males-in-general (a) to be encouraged by teachers to be creative or original (58% to 49%), (b) to build basic skills (51% to 40%), and (c) to have frequent opportunity to talk individually with teachers (40% to 31%). Females in this group, however, responded similarly to respondents-in-general. Respondents in the SCCG were somewhat more likely to be encouraged by teachers to take mathematics courses than were respondents-in-general (28% to 19%), but SCCG males (31%) to a greater extent than were SCCG females (24%).

In career related behaviors, talking about jobs, work, or careers with friends was far more prevalent (81%) among respondents-in-general to Poll 101 than was talking with workers about workers' career decisions (34%). Comparatively few (16%) respondents-in-general had attended a "career" or "job" fair where materials were displayed and business representatives talked to students. A third of the respondents-in-general had had a job interview. No significant differences were found for talking with friends, workers or business representatives, or attending career fairs among respondents-in-general and among the subgroups SCCG or non-white science-leaning respondents.

No sex differences were found between respondents-in-general and the SCCG for talking about career-related issues with counselors, family members, or teachers. No significant differences were evident between the SCCG and respondents-in-general for talking with counselors, family members or teachers on career issues except that SCCG males were somewhat more likely than were males-in-general to have talked with their teachers (45% to 37%).

Ethnic differences were evident in career-related behaviors. Non-white science-leaning females (39%) were the most likely of all respondents to Poll 101 (respondents-in-general, 25%; SCCG, 30%) to report that they had discussed post high school education or training more than three times during the past year with their guidance counselor. The non-white science-leaning group (23%) tended to report more frequent contact (more than three times) with the guidance counselor during the past year to discuss jobs or occupations than did other respondents (14%) to Poll 101. Non-white science-leaning males were the least likely (72%) of all respondents (86%) to Poll 101 to report career-related discussions with family members. Non-white science-leaning females (53%) were the most likely of all female respondents (females-in-general, 41%; science-career group females, 43%) to Poll 101 to have had career-related discussions with teachers, and to a greater extent than were non-white science-leaning males (39%). Females, especially non-white science-leaning females (38%), were the most likely of all respondents to Poll 101 (respondents-in-general, 25%; SCCG, 28%) to have sought information from the school career file or occupational library.

Although only a minority of those surveyed tended to have negative and traditional attitudes toward career roles for females, consistent males bias was noted on several issues in ratios of two to one or higher. Males-in-general, SCCG males, and science-leaning non-white males were more likely than their female peers to endorse all of the following: (1) working women take jobs away from men, (2) women should stick to "women's jobs", (3) a woman's place

is in the home, and (4) education is wasted on women since they usually get married and raise a family. Science interests appear unrelated to male endorsement of these statements. Non-white science-leaning males were somewhat more inclined than were other males to endorse the statement concerning the waste of education on females. SCCG females were slightly less inclined than were other females to endorse statements concerning women's place being in the home and education being wasted on women.

Respondents-in-general to Poll 101 gave favorable endorsements to several statements concerning career roles for females. Endorsement was made for each of the following: (1) selection of a dentist on qualifications other than sex (71%), (2) equality of science ability between sexes (67%), (3) equality of interest in mathematics between sexes (61%), (4) females possess ability and endurance required for successful space flights (40%), (5) strong approval of electing female governors (39%), and (6) approval of the appointment of a female chairman of the Atomic Energy Commission (33%).

In general, females and males in the SCCG and non-white science-leaning females tended to endorse to a greater extent than did respondents-in-general to Poll 101, each of the following: (1) selection of a dentist on other than basis of sex, (2) equality of science ability between the sexes, (3) equality of interest in mathematics between the sexes, (4) females possess ability and endurance required for successful space flights, (5) the appointment of a female chairman of the Atomic Energy Commission, and (6) the election of female governors.

Females clearly held more favorable attitudes toward female career roles than did male respondents to Poll 101. Females-in-general, SCCG females, and non-white science-leaning females endorsed by ratios of 3:2 or 2:1, compared with male peers, each of the following: (1) females possess ability and endurance required for successful space flights, (2) the appointment of a

female chairman of the Atomic Energy Commission, and (3) the election of a female governor. In addition, females-in-general, SCCG females, and non-white science-leaning females exceeded (more than 10%) their male peers in endorsing the following statements: (a) belief in the equality of mathematics interest between sexes, and (b) belief in equality of science ability between the sexes.

One interesting observation of these data was made. Male and female respondents-in-general and SCCG males and females differed little in reactions to a statement concerning males' attitudes toward working for female supervisors. About half of each group endorsed this statement. While males and females would select a dentist regardless of sex, and both sexes did agree that females are equal to males in mathematics interest and science ability, SCCG acceptance of female roles apparently does not extend to the area of supervision of work.

Science Issues

In general, respondents to Poll 101 showed positive attitudes toward the benefits and by-products of past scientific research with a willingness to provide tax support for several science programs. Only limited support would be offered, however, for continued space research, for science education programs, and for scientific research unless it had practical value.

No differences by sex were noted for science-leaning non-white respondents to Poll 101 (a) in belief in the benefits of the by-products of scientific research, (b) in belief that science and technology have done more good than harm, and (c) in belief that high altitude flying should be halted to prevent possible break in the ozone layer.

Compared with respondents-in-general to Poll 101, SCCG male and female respondents strongly endorsed (1) the need to seek alternate energy sources (61%), (2) support for science education programs (34%), and (3) continuation of space research (27%).

SCCG female respondents (80%) gave stronger support than did their male peers (69%) to the need for cancer research and the need to improve the environment (76% - 68%) as was the case for females in almost every group.

Support for space research was greater for females inclined toward the physical sciences than for those inclined toward life sciences or humanities.

Work Preferences

Results of Poll 101 showed student interest in doing theoretical or research work to be associated with high grades, plans to attend college, parental support for theoretical or research work, and inclination toward science careers (Items 23 and 24).

Nearly equal proportions of males (29%) and females (26%) in the SCCG indicated preference for such work. Student preference for theoretical work was greater than estimates of parental support both for males (20%) and for females (21%) in the SCCG. (It should be noted that there was no way in this study to determine what parents actually preferred for their children in future work.)

Sex differences were noted for all subgroups of interest for student work preferences as well as for estimates of parents' preferences. Females were the most likely to prefer serving others and teaching while males were the most likely to prefer making, building or growing things, and servicing, maintaining or repairing things.

There was remarkable similarity in students' reports of parents' work preferences for them and students' own work preferences -- for whatever reason. Preference for serving others was more widespread among female respondents-in-general and female non-white science-leaning respondents than among parents of these females. Non-white females were also less inclined to teach than their parents were said to prefer. Females inclined toward humanities also showed greater preference than did their parents for serving others and for doing theoretical work.

Among respondents inclined toward the physical sciences, 31% of the males and 28% of the females preferred theoretical work. About equal proportions preferred to make, build, or grow things. Females in this group were three times as likely as males to prefer teaching and were supported similarly by their parents' preference.

Respondents inclined toward life sciences, excluding nursing, showed similar preference and parental support for theoretical work as did physical science inclined respondents. However, nearly a third of the males (30%) and more than half (56%) of the females preferred to serve others, with parental support for this preference.

In addition, more than half the SCCG and non-white science-leaning respondents indicated that they had been encouraged to consider a career in science, mathematics, or engineering.

Reasons for not Becoming Scientists

Two major reasons were given, by respondents to Poll 101, for not becoming scientists. About four out of ten respondents-in-general indicated interest in some other career, including military service, while a third gave academic reasons.

It was a surprise to find that 33% of the SCCG and 39% of the non-white science-leaning respondents indicated intent "to get into some other kind of a career". Furthermore, fully a third or more of the respondents inclined towards physical or life sciences, and humanities careers also indicated such intent.

Academic reasons, such as poor grades, lack of required courses, required courses too hard, and long preparation needed, was the second major reason given for each of the subgroups with a range of 25% to 33% doing so. For non-white science-leaning respondents, academic reasons were the most important for four out of ten females and half the males.

Few (zero to 6% by subgroup) parents were against science careers for their children. For all subgroups in the study, males as well as females, marriage was a minor factor (ranging from 1% to 5% by subgroup) in movement away from science careers.

Financing science careers was limited as a deciding factor, ranging from 3% to 11% by subgroup, for not pursuing science careers. Financial reasons were greatest for non-white science-leaning males (11%), but were nearly as high in the SCCG (6%).

Intent to become a scientist ranged from 4% of respondents-in-general to 15% of the SCCG. It should be noted that such intent was 13% among physical science, and 12% among life science inclined respondents, but only 3% among humanities inclined respondents.

Occupational Profiles of Females

In the last item in Poll 101, respondents were asked to select from 138 occupations which were arranged in 12 job families used in Project TALENT (Flanagan, et al., 1971). The occupation or job titles were taken primarily from the Dictionary of Occupational Titles (U.S. Department of Labor, 1965). Figure 1 gives in descending order the percentage of females who selected occupations in each job family. The Secretarial-clerical job family represents the highest percentage of females (96%), followed by Teaching and social service (80%). Females constituted 60% of those expecting to pursue jobs in the Medical and biological science; 56% of those in Humanities, law, social and behavioral science, and 21% of those expecting Engineering, physical science, mathematics and architecture jobs. The lowest percentages of females were represented in the Mechanics and industrial trades fields (19%), and in the Construction trades (2%).

Of the 138 occupations offered to respondents to Poll 101, those occupations were selected for further examination if 100 or more of the respondents indicated expected future employment in the occupation. Figure 2 gives the percentages of females in the selected occupations having 100 or more respondents. The highest percentages of females in specific jobs were Secretary (98%) and Nurse (96%); the lowest percentages of females were in Engineer (4%) and Auto mechanic (1%) occupations.

Figure 3 gives in descending order the percentages of females selecting science or science related occupations. The highest percentages of females expecting science or science related jobs were in Nursing (96%) and Veterinarian (69%), and the lowest percentages were for Engineer (14%) and Physical Scientist (12%). Appendix C gives the number and percentages of males and females selecting each of the 138 jobs by job families. Comparisons were also made by ethnic groups.

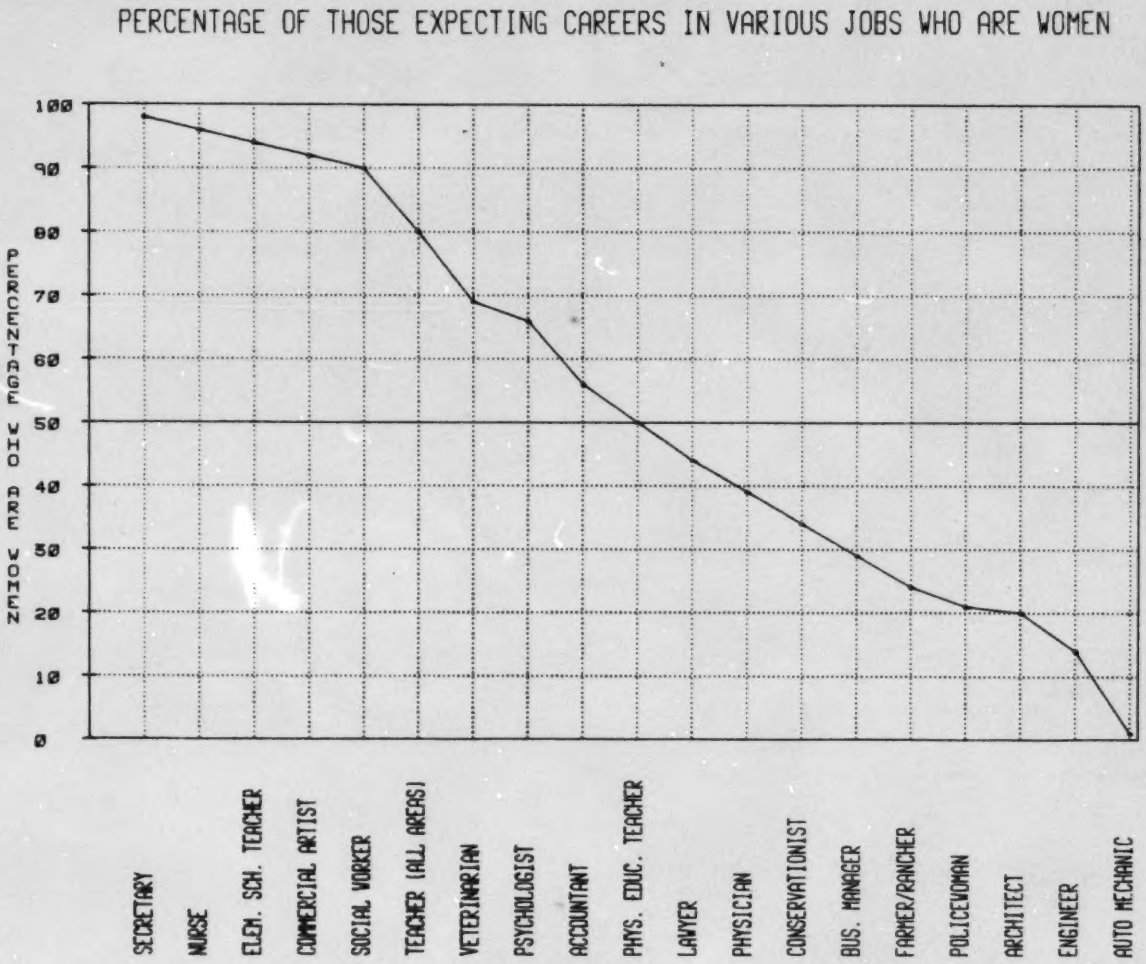


Fig. 2. Percentage of high school females by occupation, selected occupations having 100 or more respondents; total respondents to Poll 101 (N=8,621).

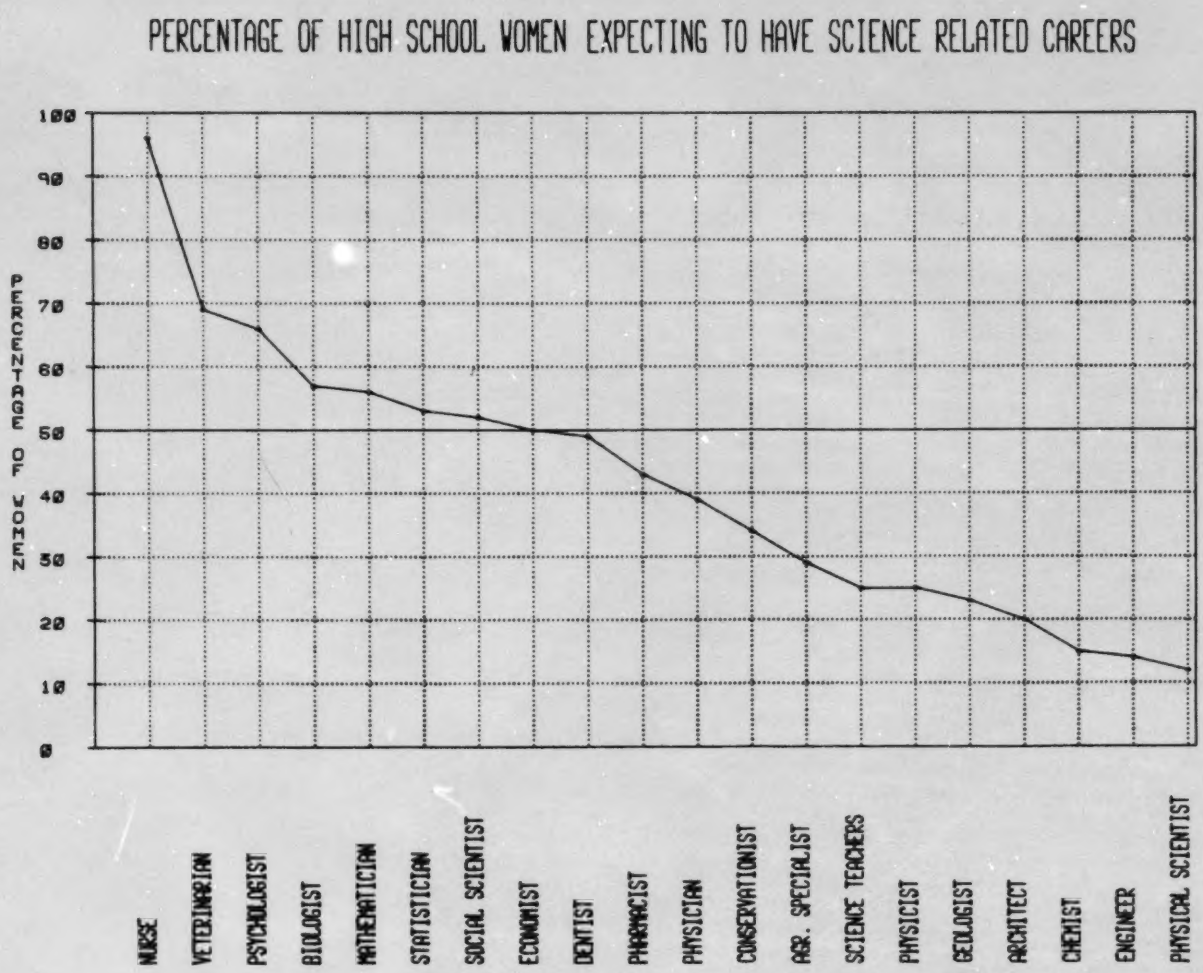


Fig. 3. Percentage of high school females by occupation in science careers, total respondents to Poll 101 (N=8,621).

A series of key items and sets of items constituting quasi scales were selected from Poll 101 to provide a profile of characteristics of high school seniors. The items and scales were used to contrast females from respondents-in-general in the high school senior group. Comparisons were then made to determine the extent to which females planning careers in science fields could be discriminated statistically[10] from females not planning on science careers. To provide a common base for comparison of items and scales, all variables were converted to standard scores having a mean of 50 and a standard deviation of 10.

Figure 4 gives the profile of high school senior females who expect to be employed in science fields in the future with senior females who plan to pursue non-science careers that would normally require college preparation. Only items and scales that were statistically significant in contrasting the two groups were included in Figure 4. Clearly the most important factors (standard scores over 55) are: (1) consideration of a science field, (2) encouragement to consider a science field, (3) high estimates of mathematical and science ability, (4) high expected educational level, (5) mathematics and science honors received, (6) number of mathematics courses taken, (7) number of science courses taken, (8) reading of science and mathematics books, and (9) level of mathematics and science skills. Similar profile analyses were used to discriminate between male and female groups planning to pursue careers in the physical sciences, the life sciences and humanities as well as analyses based on analyzing the women only. The results are also summarized in Appendix D.

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10 The statistical technique used was the discriminant analysis (Tatsuoka, 1971; Cooley and Lohnes, 1971). The particular method used in this study was Version 6-Discriminant from the (SPSS) Statistical Package for the Social Sciences (Nie, et al., 1975).

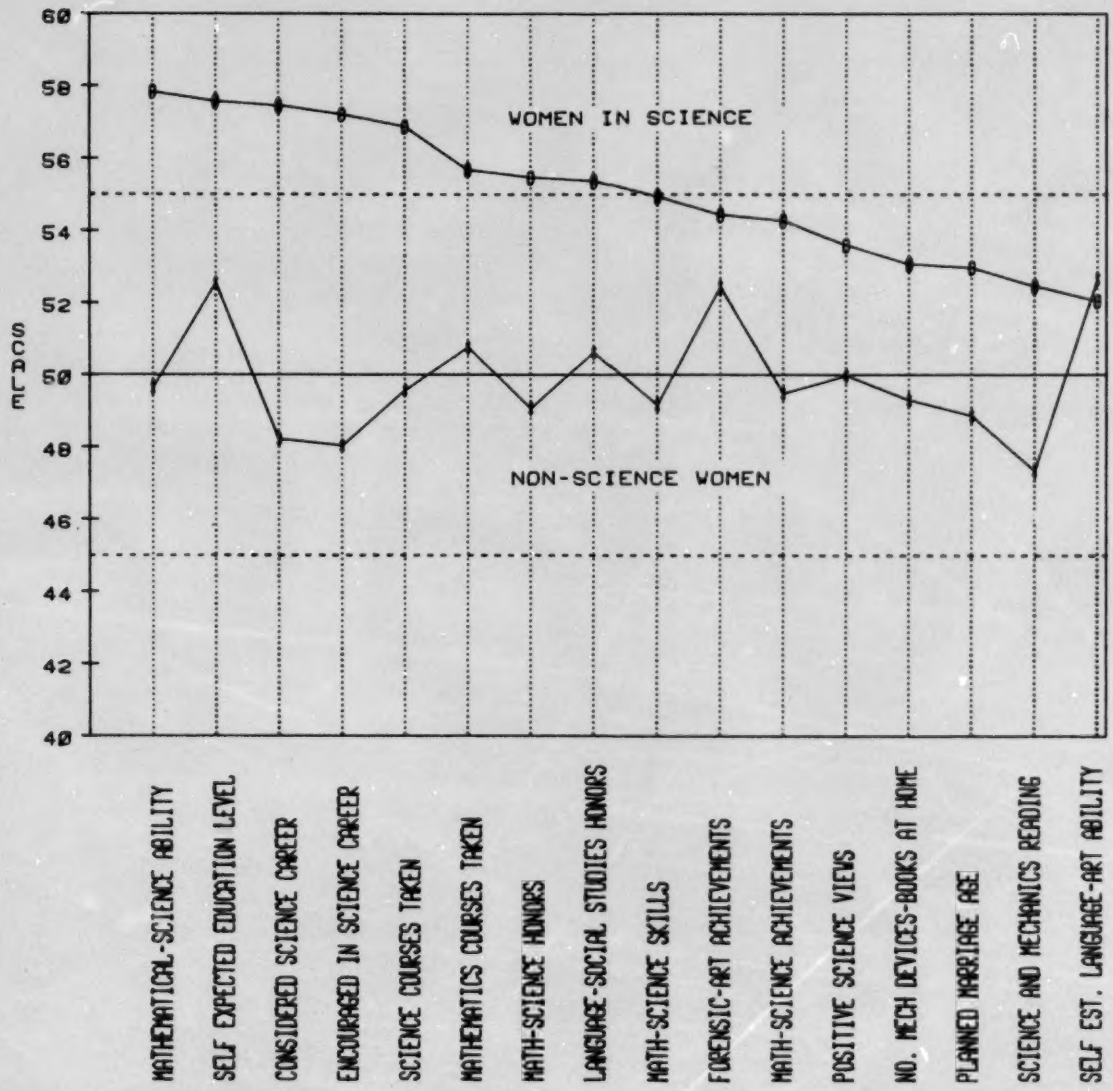


Fig. 4. Profiles by characteristics for female high school seniors planning to attend college: (a) science career goals, (b) non-science career goals.

For the purposes of this report, it seems sufficient to summarize the results. There are strong factors (educational, cultural, family, etc.) that tend to differentiate men from women; these include the tendency for females to take typing, language and home economics courses and for males to take shop, science and mechanical drawing courses. The tendency is for females to be more people and service oriented and for males to be more thing and job oriented, and for the orientation of females to become proficient in sewing and homemaking skills in contrast to males who are oriented toward the developing of mechanical skills and knowledge. A second series of factors tends to separate those planning on science careers from non-science careers somewhat independent of sex; these include consideration and encouragement to pursue science careers, taking of science and mathematics courses in contrast to business, home economics or shop-mechanical drawing classes; high self estimates and achievements in mathematics and science in contrast to lower language and social studies achievements. A third set of factors tends to include those survey items and scales on which high school females planning on careers in science differ primarily from females not planning on science careers, including being encouraged to consider science careers, like taking science courses, planning to marry at a later age, and self estimates of physical and mechanical abilities.

## III. Discussion

This study sought to examine career intentions of high school students and the reasons why science careers are, or are not, being pursued. Several conclusions can be drawn from the results of this study.

1. Those expecting to have science careers are able, capable high school students: (a) having positive attitudes toward mathematics and science courses and science issues, (b) having parental support for theoretical or research work

and teaching, (c) having been encouraged to consider science careers, and (d) having given consideration to science careers.

2. Women planning to have careers in science when compared with those not planning to do so had taken stronger mathematics and science programs in high school, expected to achieve more education and were more likely to plan to marry later and combine marriage and career.

3. Teachers often provide a favorable climate for academic growth, and are a major source of help with career development especially for the non-white science-leaning females.

4. High school students share parents' work values and may be closely internalizing these with their aspirations for post-secondary education and careers.

5. High school students frequently lack experiences and sufficient information to make informed decisions about career choices which may be the primary reason many lack the academic preparation for post-secondary studies in the sciences.

6. High school students who would like to become scientists give academic deficiencies as a major reason while others cite the greater attractiveness of other careers.

7. High school students especially women generally have positive attitudes toward science and the role and abilities of women in science and mathematics.

8. Minorities who have considered science are less likely to have taken or plan to take the high school mathematics and science courses or to have home and hobby than the majority white students.

Several implications can be drawn from the results of this study.

a. Teachers are a major resource for high school students, especially for the non-white students. Teachers appear to be concerned about career development and to be serving some of the needs of students through encouragement to expand options. If teachers are to be effective in filling information gaps, career information should be more readily accessible through the classroom or counseling offices.

b. Parents and family are a major resource and source of support in career development and should, therefore, be included in career processes provided by the school. School and families should be encouraged: (1) to provide technical and science reading materials, and (2) mathematics and science activities, (3) to stress on the helping nature of science, and (4) to encourage more women and minorities to pursue science careers.

c. Career information should be more readily accessible to students to enhance peer-to-peer discussions. Females and minorities especially appear to be seeking career information. Counseling services appear to need improvement since a large group of interested students indicated academic deficiencies as primary reasons for not becoming scientists. It cannot be determined from this study what the effects of counseling might be on any career decision. However, high school students appear to have limited, and perhaps erroneous, understanding of what is or is not a scientist, one indication that career information has been lacking. This lacking may also explain why one out of three students who would like to become scientists indicated the intent to enter "other kinds of careers" where presumably career information is available and appealing.

d. Females may not have had as much exposure to technical reading and "hands-on" activities as their male peers have had while growing up. These minorities may not have as strong backgrounds in science courses and experience.

These could be handicaps in science courses which are taught based on the assumption of prior experiences and vocabulary. Failure in the courses, low grades, or extensive amounts of time and energy expended to achieve may be possible outcomes for females and minorities enrolled in such courses in competition with white males equipped with such experiences prior to post-secondary science entry.

e. Females inclined toward the sciences have different interests and preferences than do their male peers. They are more likely to be interested in careers which are people related, such as the life sciences, or in other science areas that are service oriented and prove to be an increasingly positive force in science and society.

Clearly more information about the nature of science and science careers is needed if science is to become a viable option for capable and interested high school students, especially women and minorities. Educational experiences to learn about science as a positive helping way of life could also help to make science a more viable career for women and minorities.

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APPENDIX

A. Survey procedures

B. Composition of respondents
Poll 101 Items

C. Occupational choices from list of 138 occupations

D. Results of analysis of variance of male and female seniors planning to have science and non-science careers on selected variables

# APPENDIX A

## Questionnaire Development

In this study, an item pool was formed (a) by selecting relevant questions in existing data from Purdue Opinion Panel studies on career topics, and (b) by developing new questions on the basis of a review of the literature on a wide range of career and science issues. Items were individually critiqued by four members of the research team for potential effectiveness. Criteria for item selection were the following: (1) the extent to which the universe of content was sampled, (2) the simplicity of item wording -- clarity, comprehension, etc., (3) results of item analyses, and (4) avoidance of response bias. In addition, items were ranked on the extent to which the items demonstrated respondent differentiation on the basis of sex, ethnic group, and science-leaning attitudes.

## Selection of Panel

A multi-stage stratification was used to draw a sample of schools to participate in this study. The target group was public and private secondary schools throughout the United States.

The following sources were used in making the selection: a directory of schools in selected districts published by the Office for Civil Rights (1972), Pattersons' American Education (1974), and the Statistical Abstract of the United States (1973). Five waves of invitations were issued: (1) a random selection, with ratio of 1/125, from all secondary schools, (2) a random selection of 10% of all secondary schools in 13 of the 50 largest metropolitan cities, (3) a random selection of 60 schools in rural areas of the East, the South, and the West, (4) a random selection of schools in cities with population of 50,000 or more, and (5) a random selection of schools in cities with population of 100,000 or more. A total of 129 schools accepted invitations to participate, referred to as the Panel. Further information on this study can be found in Report of Poll 101 (Erlick & LeBold, 1975).

# APPENDIX B

## COMPOSITION IN PERCENTAGES AND FREQUENCIES OF THE RESPONDENTS ON WHICH THIS ANALYSIS IS BASED

Total Number of Respondents 8621*

| | % in Sample | no. in Sample |
|---|---|---|
| All Respondents | | |
| Males | 48.3 | 4160 |
| Females | 51.7 | 4461 |
| Science Career Choices[1] | | |
| Males | 6.6 | 568 |
| Females | 4.4 | 379 |
| Non-white Science Leaning[2] | | |
| Males | 3.2 | 274 |
| Females | 2.3 | 196 |
| Job Family Preferences[3] | | |
| Physical Sciences | | |
| Males | 4.8 | 417 |
| Females | 1.4 | 124 |
| Life Science | | |
| Males | 4.2 | 365 |
| Females | 8.2 | 707 |
| Humanities | | |
| Males | 3.3 | 281 |
| Females | 4.7 | 409 |
| Occupational Choices[4] | | |
| Physical Sciences | | |
| Males | 4.5 | 391 |
| Females | 1.2 | 102 |
| Life Science | | |
| Males | 5.1 | 443 |
| Females | | |
| Nurses | 3.4 | 306 |
| Non-nurses | 4.1 | 351 |
| Humanities | | |
| Males | 2.5 | 213 |
| Females | 3.5 | 300 |

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*Data obtained from the total responses available to Poll 101.

[1]All respondents to Poll 101 who selected one of the following occupations as the ONE closest to the occupation expected in future employment: architect, chemist, engineer (n.e.c., aerospace, chemical, civil/hydraulic, electrical/electronic, mechanical/automotive), geologist, mathematician/statistician, college math teacher, physical scientist (n.e.c.), college science teacher, biologist/zoologist, dentist, pharmacist, physician, veterinarian, economist, psychologist, social scientist.

[2]Non-white respondents who responded to Item 34 that they had given consideration to careers in science, mathematics, or engineering.

[3]Responses to Item 25 that the following job families are preferred for future employment: Physical Science (engineering, physical science, mathematics and architecture), Life Science (medical and biological sciences), and Humanities, (humanities, law, social and behavioral sciences).

[4]Occupations selected from a list of 138 types and grouped into job families.

Physical Science: Engineering, Physical Science, Mathematics, & Architecture
- Architect
- Chemist
- Engineer (n.e.c.)
  - aerospace
  - chemical
  - civil, hydraulic
  - electrical, electronic
  - mechanical, automotive
- Geologist
- Mathematician, statistician
  - college math teacher
  - high school math teacher
- Physical scientist (n.e.c.)
- Physicist
- Science teachers
  - college science teacher
  - high school science teacher

Life Science: Medical & Biological Sciences
- Agricultural specialist
- Biologist, zoologist
- Dentist
- Nurse
- Pharmacist
- Physician
- Veterinarian
- Wildlife/conservation specialist

Humanities: Humanities, Law, Social & Behavioral Sciences
- Diplomat
- Economist
- Journalist, reporter
- Lawyer
- Librarian
- Psychologist
- Social scientist
- Teacher
  - college (n.e.c.)
  - English
    - college
    - high school
  - Foreign language
    - college
    - high school
  - Social sciences & studies
    - college
    - high school
- Writer

| | Total National Sample* | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 1. Are you male or female? | | | | | | | | | | |
| Male | 51 | 48 | 100 | 0 | 60 | 100 | 0 | 58 | 100 | 0 |
| Female | 49 | 52 | 0 | 100 | 40 | 0 | 100 | 42 | 0 | 100 |
| 2. What is your grade in school? | | | | | | | | | | |
| Grade 10 | 35 | 33 | 33 | 33 | 32 | 27 | 39 | 34 | 33 | 36 |
| Grade 11 | 33 | 34 | 34 | 35 | 35 | 36 | 33 | 31 | 31 | 31 |
| Grade 12 | 32 | 33 | 34 | 33 | 33 | 37 | 28 | 35 | 36 | 33 |
| 3. Which one of the following do you plan to do immediately after finishing high school? (Mark only ONE.) | | | | | | | | | | |
| Go to college | 48 | 46 | 45 | 47 | 71 | 70 | 73 | 53 | 47 | 60 |
| Take special training other than college | 10 | 10 | 10 | 10 | 5 | 6 | 4 | 13 | 14 | 11 |
| Go to work | 20 | 19 | 20 | 19 | 8 | 8 | 7 | 14 | 15 | 13 |
| Enter military service | 5 | 5 | 8 | 3 | 4 | 4 | 2 | 9 | 11 | 5 |
| Other plans or don't know | 18 | 18 | 17 | 20 | 12 | 11 | 13 | 13 | 14 | 11 |
| 4. Which of the following best describes the kind of grades you usually get in high school? | | | | | | | | | | |
| Below average | 4 | 4 | 6 | 2 | 2 | 3 | 1 | 4 | 5 | 2 |
| Average | 44 | 48 | 50 | 46 | 31 | 32 | 30 | 52 | 51 | 53 |
| Above average | 41 | 39 | 36 | 42 | 49 | 50 | 49 | 35 | 34 | 37 |
| Excellent | 11 | 8 | 8 | 9 | 17 | 14 | 20 | 9 | 10 | 8 |

* Erlick, A. C., and LeBold, W. K. Factors Influencing the Science Career Plans of High School Students. Report of Poll 101 of the Purdue Opinion Panel, © by the Purdue Research Foundation, 1975, 34.

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 77 | 100 | 0 | 34 | 100 | 0 | 41 | 100 | 0 | 79 | 100 | 0 | 40 | 100 | 0 | 0 | 42 | 100 | 0 |
| 23 | 0 | 100 | 66 | 0 | 100 | 59 | 0 | 100 | 21 | 0 | 100 | 60 | 0 | 100 | 100 | 58 | 0 | 100 |
| 29 | 27 | 35 | 34 | 36 | 33 | 28 | 30 | 28 | 28 | 26 | 35 | 37 | 34 | 38 | 42 | 29 | 26 | 31 |
| 37 | 37 | 36 | 32 | 29 | 33 | 33 | 30 | 36 | 39 | 39 | 37 | 31 | 33 | 28 | 32 | 33 | 31 | 34 |
| 34 | 36 | 28 | 34 | 35 | 34 | 38 | 40 | 37 | 33 | 35 | 27 | 31 | 33 | 34 | 27 | 38 | 43 | 34 |
| 70 | 69 | 74 | 71 | 78 | 67 | 73 | 76 | 71 | 66 | 67 | 65 | 64 | 72 | 49 | 69 | 82 | 84 | 80 |
| 6 | 6 | 6 | 8 | 2 | 11 | 4 | 5 | 3 | 8 | 8 | 9 | 9 | 5 | 20 | 4 | 2 | 2 | 2 |
| 7 | 8 | 4 | 6 | 5 | 7 | 7 | 4 | 10 | 9 | 10 | 7 | 10 | 7 | 14 | 9 | 5 | 4 | 7 |
| 6 | 7 | 1 | 4 | 6 | 3 | 3 | 5 | 3 | 5 | 5 | 5 | 3 | 4 | 4 | 1 | 2 | 1 | 2 |
| 11 | 10 | 15 | 11 | 8 | 12 | 13 | 11 | 14 | 11 | 10 | 15 | 14 | 12 | 12 | 17 | 9 | 8 | 9 |
| 2 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 3 | 3 | 3 | 3 | 4 | 2 | 2 | 2 | 2 | 1 |
| 30 | 32 | 27 | 32 | 28 | 34 | 30 | 31 | 29 | 33 | 34 | 27 | 37 | 35 | 47 | 32 | 21 | 18 | 24 |
| 47 | 48 | 44 | 51 | 53 | 49 | 51 | 48 | 53 | 45 | 47 | 38 | 47 | 47 | 43 | 48 | 54 | 57 | 52 |
| 20 | 17 | 30 | 16 | 17 | 16 | 17 | 19 | 16 | 18 | 15 | 30 | 13 | 14 | 8 | 18 | 23 | 22 | 23 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 5. Have you ever used any of these materials in your science courses? (Mark as many as apply.) | | | | | | | | | | |
| School Math Study Group (SMSG) | 7 | 8 | 9 | 7 | 6 | 7 | 5 | 14 | 14 | 14 |
| Physical Science Study Committee (PSSC) | 7 | 6 | 7 | 6 | 7 | 9 | 4 | 9 | 12 | 5 |
| Chemical Education Material Study (CHEMS) | 9 | 8 | 9 | 6 | 11 | 13 | 9 | 11 | 12 | 10 |
| Biological Science Curriculum (BSCS) | 31 | 29 | 29 | 29 | 30 | 30 | 31 | 33 | 33 | 33 |
| Harvard Project Physics (HPP) | 2 | 2 | 3 | 1 | 4 | 4 | 4 | 3 | 4 | 1 |
| Engineering Concepts Curriculum (ECCP) | 1 | 1 | 2 | 0 | 2 | 2 | 1 | 3 | 4 | 1 |
| Introductory Physical Science (IPS) | 22 | 19 | 20 | 18 | 22 | 23 | 20 | 16 | 14 | 17 |
| Intermediate Science Curriculum Study (ISCS) | 7 | 7 | 7 | 6 | 6 | 8 | 4 | 6 | 8 | 4 |
| 6. Which of the following are you? | | | | | | | | | | |
| White | 89 | 85 | 85 | 86 | 91 | 90 | 92 | 4 | 6 | 1 |
| Black | 4 | 8 | 8 | 8 | 4 | 4 | 3 | 51 | 48 | 56 |
| American Indian | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 15 | 17 | 11 |
| Spanish American (Mexican, Puerto Rican, Cuban, etc.) | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 21 | 21 | 21 |
| Some other than above | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 14 | 15 | 13 |
| 7. Did you ever participate in an honors or advanced placement program in any of these? (Mark as many as apply.) | | | | | | | | | | |
| Mathematics | 21 | 18 | 20 | 15 | 29 | 31 | 26 | 23 | 24 | 21 |
| Biology | 10 | 9 | 10 | 8 | 14 | 15 | 12 | 12 | 12 | 12 |
| Chemistry | 5 | 3 | 5 | 2 | 8 | 10 | 4 | 6 | 7 | 5 |
| Physics | 2 | 2 | 3 | 1 | 3 | 4 | 2 | 5 | 7 | 3 |
| English | 17 | 15 | 14 | 16 | 19 | 17 | 22 | 20 | 19 | 22 |
| Social Studies | 9 | 8 | 9 | 7 | 11 | 11 | 10 | 12 | 12 | 12 |
| Foreign Languages | 7 | 6 | 6 | 7 | 10 | 9 | 11 | 7 | 5 | 9 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Nurse | Non-Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 4 | 4 | 2 | 7 | 7 | 6 | 7 | 9 | 5 | 6 | 6 | 4 | 8 | 9 | 9 | 6 | 5 | 7 | 4 |
| 9 | 9 | 6 | 5 | 8 | 4 | 6 | 9 | 5 | 8 | 9 | 4 | 6 | 7 | 6 | 5 | 5 | 6 | 5 |
| 12 | 13 | 10 | 13 | 16 | 11 | 9 | 12 | 7 | 10 | 10 | 7 | 12 | 15 | 11 | 10 | 9 | 9 | 8 |
| 29 | 28 | 31 | 33 | 33 | 33 | 30 | 33 | 29 | 27 | 26 | 31 | 35 | 36 | 32 | 35 | 32 | 35 | 29 |
| 6 | 5 | 7 | 3 | 6 | 1 | 3 | 4 | 2 | 4 | 3 | 7 | 3 | 5 | 2 | 2 | 3 | 4 | 2 |
| 2 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 0 |
| 21 | 22 | 19 | 18 | 20 | 18 | 21 | 20 | 22 | 23 | 24 | 21 | 19 | 20 | 18 | 20 | 23 | 23 | 23 |
| 6 | 7 | 5 | 6 | 7 | 6 | 6 | 7 | 5 | 7 | 8 | 3 | 6 | 7 | 6 | 6 | 6 | 8 | 5 |
| 87 | 86 | 90 | 88 | 89 | 87 | 89 | 88 | 90 | 90 | 90 | 88 | 90 | 89 | 88 | 91 | 90 | 89 | 91 |
| 5 | 5 | 6 | 6 | 6 | 7 | 6 | 7 | 5 | 4 | 4 | 6 | 4 | 4 | 5 | 3 | 5 | 5 | 4 |
| 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 3 | 2 | 2 | 1 | 2 | 1 | 2 | 1 |
| 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 2 | 3 | 2 | 3 | 1 | 3 |
| 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 |
| 38 | 37 | 40 | 23 | 28 | 20 | 22 | 24 | 20 | 34 | 33 | 36 | 21 | 24 | 15 | 23 | 26 | 30 | 24 |
| 12 | 13 | 10 | 15 | 18 | 14 | 10 | 11 | 10 | 12 | 13 | 11 | 13 | 16 | 8 | 14 | 12 | 12 | 12 |
| 9 | 10 | 6 | 7 | 10 | 5 | 4 | 7 | 3 | 9 | 9 | 7 | 6 | 8 | 3 | 5 | 6 | 9 | 4 |
| 5 | 6 | 2 | 2 | 4 | 2 | 1 | 2 | 1 | 5 | 5 | 4 | 3 | 4 | 1 | 3 | 2 | 2 | 1 |
| 18 | 18 | 19 | 20 | 18 | 21 | 24 | 23 | 25 | 17 | 17 | 21 | 16 | 15 | 15 | 20 | 29 | 30 | 28 |
| 11 | 11 | 10 | 9 | 11 | 8 | 12 | 12 | 11 | 11 | 10 | 12 | 8 | 9 | 5 | 9 | 15 | 18 | 13 |
| 8 | 7 | 12 | 8 | 8 | 8 | 13 | 12 | 14 | 9 | 8 | 14 | 8 | 8 | 6 | 11 | 19 | 18 | 19 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 8. Indicate the highest level of education of your father. | | | | | | | | | | |
| Less than high school graduate | 25 | 27 | 26 | 29 | 16 | 15 | 17 | 37 | 35 | 41 |
| High school graduate | 31 | 30 | 32 | 28 | 26 | 29 | 22 | 27 | 30 | 23 |
| Vocational, business, or apprentice training, military service | 14 | 15 | 13 | 16 | 14 | 12 | 16 | 11 | 12 | 11 |
| Attended community college, 1 - 3 years of college | 10 | 9 | 9 | 9 | 13 | 12 | 14 | 7 | 7 | 7 |
| Graduated from 4-year college (bachelor's degree) | 12 | 11 | 11 | 11 | 18 | 17 | 18 | 8 | 8 | 7 |
| Advanced college degree (master's or doctor's degree) | 8 | 7 | 8 | 7 | 14 | 14 | 13 | 9 | 8 | 10 |
| 9. Indicate the highest level of education of your mother. | | | | | | | | | | |
| Less than high school graduate | 19 | 22 | 19 | 24 | 13 | 13 | 14 | 35 | 35 | 36 |
| High school graduate | 47 | 45 | 47 | 43 | 43 | 43 | 43 | 35 | 38 | 32 |
| Vocational, business, or apprentice training, military service | 9 | 8 | 7 | 9 | 10 | 9 | 10 | 6 | 6 | 5 |
| Attended community college, 1 to 3 years of college | 11 | 11 | 11 | 11 | 11 | 12 | 10 | 10 | 9 | 10 |
| Graduated from 4-year college (bachelor's degree) | 10 | 10 | 11 | 9 | 17 | 18 | 15 | 9 | 8 | 10 |
| Advanced college degree (master's or doctor's degree) | 4 | 3 | 3 | 3 | 5 | 4 | 6 | 5 | 5 | 5 |
| 10. Indicate the highest level of education <u>you expect to have during your life</u>. | | | | | | | | | | |
| Less than high school graduate | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0 |
| High school graduate | 17 | 19 | 17 | 21 | 5 | 5 | 7 | 10 | 11 | 9 |
| Vocational, business, or apprentice training, military service | 20 | 19 | 21 | 18 | 9 | 9 | 8 | 17 | 19 | 15 |
| Attended community college, 1 to 3 years of college | 16 | 15 | 12 | 18 | 9 | 8 | 11 | 13 | 11 | 16 |
| Graduated from 4-year college (bachelor's degree) | 26 | 26 | 27 | 25 | 33 | 35 | 31 | 27 | 27 | 27 |
| Advanced college degree (master's or doctor's degree) | 18 | 16 | 18 | 14 | 40 | 38 | 42 | 28 | 26 | 31 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 17 | 15 | 23 | 19 | 15 | 21 | 15 | 12 | 17 | 18 | 18 | 20 | 19 | 14 | 26 | 19 | 16 | 11 | 19 |
| 28 | 31 | 20 | 26 | 23 | 27 | 27 | 30 | 25 | 27 | 28 | 25 | 28 | 30 | 35 | 20 | 21 | 24 | 18 |
| 12 | 12 | 12 | 16 | 14 | 17 | 16 | 12 | 18 | 12 | 11 | 14 | 16 | 13 | 18 | 18 | 14 | 13 | 15 |
| 12 | 12 | 14 | 11 | 13 | 10 | 11 | 11 | 11 | 13 | 13 | 15 | 9 | 10 | 8 | 9 | 13 | 13 | 13 |
| 18 | 18 | 18 | 15 | 16 | 14 | 18 | 20 | 16 | 16 | 17 | 15 | 14 | 15 | 10 | 17 | 19 | 22 | 17 |
| 11 | 11 | 12 | 13 | 18 | 11 | 14 | 15 | 13 | 13 | 13 | 14 | 12 | 16 | 4 | 15 | 17 | 18 | 16 |
| 15 | 14 | 19 | 14 | 8 | 17 | 11 | 9 | 13 | 16 | 16 | 19 | 15 | 10 | 24 | 14 | 12 | 8 | 14 |
| 44 | 43 | 45 | 42 | 44 | 41 | 39 | 37 | 40 | 42 | 42 | 43 | 42 | 42 | 43 | 42 | 37 | 38 | 36 |
| 8 | 7 | 8 | 10 | 8 | 11 | 10 | 10 | 11 | 8 | 8 | 7 | 9 | 6 | 9 | 11 | 12 | 11 | 12 |
| 13 | 14 | 9 | 13 | 12 | 13 | 13 | 15 | 11 | 12 | 13 | 9 | 13 | 16 | 14 | 9 | 13 | 13 | 13 |
| 16 | 17 | 12 | 14 | 19 | 12 | 18 | 21 | 15 | 17 | 18 | 16 | 14 | 19 | 5 | 15 | 17 | 18 | 17 |
| 4 | 3 | 6 | 5 | 6 | 4 | 8 | 8 | 8 | 3 | 3 | 5 | 4 | 5 | 2 | 6 | 8 | 10 | 6 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 5 | 4 | 7 | 3 | 2 | 4 | 5 | 4 | 6 | 7 | 6 | 9 | 7 | 4 | 12 | 7 | 4 | 1 | 5 |
| 9 | 10 | 9 | 10 | 5 | 13 | 7 | 6 | 8 | 11 | 12 | 10 | 10 | 6 | 20 | 8 | 4 | 3 | 5 |
| 9 | 8 | 9 | 16 | 7 | 20 | 11 | 10 | 11 | 9 | 8 | 10 | 16 | 10 | 26 | 15 | 5 | 3 | 7 |
| 42 | 43 | 37 | 31 | 29 | 31 | 33 | 28 | 36 | 37 | 39 | 31 | 29 | 33 | 27 | 26 | 34 | 29 | 37 |
| 32 | 29 | 40 | 37 | 53 | 28 | 41 | 48 | 36 | 31 | 29 | 41 | 33 | 42 | 9 | 42 | 50 | 60 | 44 |

| | | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 11. Rate yourself on each of the following traits as you really think you are compared with the average student of your own age. We want the most accurate estimate of how you see yourself. (Mark one for each trait.) | | | | | | | | | | |
| A. Academic ability | | | | | | | | | | |
| Above average | 39 | 34 | 33 | 34 | 54 | 54 | 54 | 35 | 34 | 36 |
| Average | 51 | 55 | 54 | 56 | 41 | 41 | 41 | 54 | 53 | 56 |
| Below average | 7 | 8 | 9 | 7 | 3 | 4 | 2 | 9 | 10 | 7 |
| B. Athletic ability | | | | | | | | | | |
| Above average | 33 | 33 | 41 | 25 | 38 | 44 | 28 | 40 | 50 | 25 |
| Average | 53 | 53 | 47 | 59 | 52 | 46 | 61 | 47 | 39 | 58 |
| Below average | 11 | 10 | 8 | 12 | 8 | 7 | 9 | 7 | 4 | 10 |
| C. Artistic ability | | | | | | | | | | |
| Above average | 20 | 19 | 18 | 19 | 20 | 19 | 23 | 21 | 22 | 20 |
| Average | 42 | 42 | 40 | 44 | 45 | 43 | 47 | 42 | 45 | 39 |
| Below average | 34 | 34 | 36 | 32 | 31 | 33 | 28 | 28 | 25 | 32 |
| D. Mathematical ability | | | | | | | | | | |
| Above average | 31 | 26 | 30 | 22 | 46 | 47 | 45 | 30 | 34 | 24 |
| Average | 50 | 53 | 51 | 55 | 40 | 40 | 40 | 50 | 48 | 53 |
| Below average | 15 | 16 | 13 | 18 | 10 | 8 | 13 | 14 | 12 | 18 |
| E. Mechanical ability | | | | | | | | | | |
| Above average | 19 | 18 | 30 | 6 | 26 | 35 | 13 | 21 | 31 | 8 |
| Average | 45 | 42 | 46 | 39 | 46 | 47 | 43 | 41 | 43 | 39 |
| Below average | 30 | 32 | 17 | 47 | 23 | 12 | 39 | 29 | 20 | 41 |
| F. Speaking ability | | | | | | | | | | |
| Above average | 26 | 26 | 24 | 27 | 30 | 29 | 31 | 32 | 30 | 35 |
| Average | 60 | 60 | 58 | 62 | 61 | 61 | 61 | 52 | 52 | 51 |
| Below average | 10 | 9 | 11 | 7 | 7 | 7 | 6 | 9 | 9 | 9 |
| G. Scientific ability | | | | | | | | | | |
| Above average | 19 | 17 | 22 | 13 | 36 | 40 | 30 | 23 | 23 | 24 |
| Average | 53 | 54 | 52 | 56 | 50 | 46 | 55 | 53 | 51 | 54 |
| Below average | 21 | 23 | 20 | 26 | 10 | 9 | 12 | 16 | 16 | 15 |
| H. Problem solving skills | | | | | | | | | | |
| Above average | 27 | 25 | 29 | 21 | 44 | 47 | 38 | 29 | 31 | 26 |
| Average | 63 | 63 | 59 | 67 | 51 | 48 | 56 | 57 | 53 | 63 |
| Below average | 6 | 7 | 6 | 8 | 3 | 3 | 4 | 7 | 8 | 6 |
| I. Social skills | | | | | | | | | | |
| Above average | 27 | 26 | 23 | 29 | 29 | 26 | 33 | 29 | 27 | 31 |
| Average | 62 | 61 | 60 | 62 | 61 | 61 | 60 | 55 | 54 | 55 |
| Below average | 8 | 7 | 10 | 5 | 7 | 9 | 4 | 9 | 11 | 5 |
| J. Drive to achieve | | | | | | | | | | |
| Above average | 44 | 42 | 41 | 42 | 51 | 50 | 54 | 52 | 51 | 53 |
| Average | 49 | 50 | 48 | 51 | 43 | 43 | 42 | 38 | 38 | 38 |
| Below average | 4 | 4 | 6 | 3 | 3 | 5 | 2 | 5 | 6 | 4 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 58 | 55 | 68 | 52 | 58 | 49 | 57 | 58 | 56 | 53 | 51 | 60 | 47 | 52 | 32 | 53 | 67 | 72 | 64 |
| 37 | 40 | 28 | 44 | 39 | 47 | 40 | 37 | 42 | 41 | 42 | 34 | 48 | 44 | 58 | 43 | 30 | 27 | 32 |
| 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 4 | 2 | 4 | 4 | 8 | 2 | 2 | 1 | 2 |
| 38 | 42 | 25 | 34 | 46 | 28 | 38 | 54 | 27 | 39 | 43 | 22 | 34 | 46 | 19 | 32 | 35 | 50 | 24 |
| 52 | 49 | 61 | 56 | 47 | 60 | 49 | 37 | 57 | 51 | 47 | 64 | 56 | 47 | 65 | 59 | 53 | 42 | 61 |
| 8 | 7 | 10 | 9 | 6 | 10 | 11 | 6 | 15 | 8 | 7 | 13 | 9 | 7 | 14 | 8 | 11 | 6 | 15 |
| 19 | 17 | 26 | 19 | 22 | 18 | 20 | 15 | 23 | 19 | 17 | 28 | 18 | 19 | 13 | 22 | 20 | 18 | 21 |
| 43 | 44 | 40 | 46 | 39 | 50 | 44 | 43 | 45 | 43 | 43 | 43 | 47 | 42 | 48 | 52 | 45 | 43 | 46 |
| 33 | 34 | 29 | 32 | 37 | 29 | 33 | 38 | 29 | 32 | 34 | 24 | 32 | 36 | 34 | 24 | 33 | 37 | 30 |
| 61 | 59 | 68 | 35 | 41 | 31 | 32 | 37 | 28 | 53 | 51 | 60 | 35 | 41 | 23 | 38 | 38 | 45 | 34 |
| 31 | 33 | 23 | 50 | 47 | 51 | 48 | 43 | 52 | 36 | 38 | 28 | 48 | 45 | 56 | 46 | 46 | 40 | 50 |
| 4 | 3 | 7 | 13 | 10 | 14 | 17 | 15 | 18 | 7 | 6 | 9 | 13 | 12 | 17 | 12 | 14 | 13 | 15 |
| 36 | 40 | 20 | 13 | 24 | 8 | 11 | 17 | 7 | 37 | 40 | 25 | 15 | 27 | 5 | 10 | 11 | 20 | 5 |
| 43 | 44 | 42 | 48 | 55 | 45 | 47 | 55 | 42 | 43 | 43 | 42 | 48 | 53 | 41 | 47 | 47 | 51 | 45 |
| 14 | 10 | 29 | 34 | 17 | 43 | 37 | 20 | 48 | 13 | 10 | 25 | 32 | 16 | 48 | 39 | 36 | 24 | 45 |
| 24 | 25 | 23 | 32 | 32 | 32 | 43 | 49 | 39 | 25 | 24 | 26 | 28 | 29 | 25 | 30 | 50 | 57 | 44 |
| 63 | 62 | 68 | 58 | 57 | 58 | 49 | 41 | 54 | 64 | 64 | 61 | 60 | 58 | 63 | 61 | 45 | 38 | 51 |
| 10 | 12 | 6 | 8 | 9 | 7 | 6 | 6 | 6 | 9 | 8 | 11 | 8 | 10 | 7 | 7 | 3 | 3 | 4 |
| 41 | 43 | 35 | 37 | 49 | 31 | 22 | 30 | 17 | 37 | 38 | 32 | 33 | 42 | 16 | 36 | 27 | 36 | 20 |
| 49 | 47 | 56 | 52 | 42 | 57 | 59 | 56 | 61 | 48 | 46 | 57 | 53 | 48 | 63 | 52 | 55 | 52 | 57 |
| 7 | 7 | 6 | 9 | 6 | 10 | 15 | 9 | 20 | 10 | 11 | 7 | 11 | 7 | 18 | 10 | 15 | 8 | 21 |
| 51 | 49 | 57 | 32 | 42 | 27 | 36 | 43 | 30 | 51 | 49 | 57 | 33 | 41 | 22 | 32 | 40 | 49 | 34 |
| 45 | 47 | 40 | 61 | 53 | 65 | 57 | 51 | 62 | 44 | 45 | 40 | 60 | 54 | 68 | 61 | 54 | 47 | 59 |
| 2 | 2 | 3 | 5 | 3 | 6 | 4 | 3 | 6 | 2 | 3 | 2 | 5 | 3 | 8 | 5 | 4 | 2 | 5 |
| 23 | 21 | 28 | 33 | 33 | 34 | 47 | 48 | 46 | 22 | 22 | 20 | 29 | 26 | 27 | 34 | 51 | 57 | 46 |
| 65 | 65 | 66 | 58 | 56 | 58 | 47 | 45 | 48 | 66 | 64 | 73 | 62 | 62 | 66 | 59 | 44 | 38 | 49 |
| 10 | 12 | 3 | 6 | 9 | 4 | 4 | 5 | 4 | 9 | 9 | 6 | 6 | 9 | 4 | 3 | 3 | 4 | 3 |
| 52 | 49 | 63 | 55 | 57 | 55 | 54 | 55 | 54 | 49 | 48 | 57 | 51 | 53 | 45 | 54 | 58 | 59 | 57 |
| 43 | 45 | 35 | 40 | 36 | 42 | 41 | 39 | 42 | 43 | 45 | 35 | 43 | 39 | 49 | 44 | 39 | 36 | 40 |
| 4 | 5 | 0 | 3 | 5 | 1 | 3 | 2 | 3 | 4 | 5 | 3 | 3 | 6 | 2 | 2 | 1 | 2 | 0 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 12. Here is a list of high school subjects. Indicate (1) whether or not you have taken each course, and (2) whether you like (more than dislike) or dislike (more than like) each subject. | | | | | | | | | | |
| A. Algebra | | | | | | | | | | |
| Taken or taking | 80 | 78 | 78 | 78 | 91 | 92 | 91 | 72 | 70 | 74 |
| Have not taken | 16 | 18 | 18 | 19 | 7 | 7 | 8 | 21 | 22 | 20 |
| Will take | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 5 | 7 | 4 |
| B. Plane geometry | | | | | | | | | | |
| Taken or taking | 49 | 46 | 48 | 44 | 70 | 71 | 68 | 44 | 46 | 42 |
| Have not taken | 40 | 43 | 40 | 47 | 21 | 20 | 23 | 41 | 40 | 42 |
| Will take | 6 | 5 | 6 | 5 | 6 | 6 | 7 | 9 | 9 | 8 |
| C. Trigonometry | | | | | | | | | | |
| Taken or taking | 15 | 14 | 17 | 12 | 30 | 35 | 23 | 14 | 16 | 10 |
| Have not taken | 65 | 66 | 61 | 72 | 41 | 36 | 48 | 62 | 60 | 65 |
| Will take | 14 | 13 | 15 | 11 | 23 | 23 | 24 | 14 | 14 | 13 |
| D. Biology | | | | | | | | | | |
| Taken or taking | 78 | 75 | 74 | 77 | 84 | 83 | 85 | 78 | 74 | 84 |
| Have not taken | 14 | 16 | 16 | 15 | 10 | 11 | 9 | 10 | 11 | 7 |
| Will take | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 6 | 6 | 7 |
| E. Chemistry | | | | | | | | | | |
| Taken or taking | 27 | 25 | 28 | 22 | 43 | 48 | 35 | 28 | 28 | 28 |
| Have not taken | 52 | 54 | 49 | 59 | 31 | 29 | 36 | 46 | 47 | 43 |
| Will take | 15 | 14 | 14 | 14 | 21 | 18 | 27 | 16 | 14 | 18 |
| F. Physics | | | | | | | | | | |
| Taken or taking | 11 | 12 | 16 | 9 | 21 | 26 | 15 | 14 | 18 | 9 |
| Have not taken | 66 | 66 | 59 | 71 | 46 | 41 | 53 | 59 | 57 | 63 |
| Will take | 14 | 13 | 15 | 12 | 26 | 26 | 26 | 13 | 11 | 17 |
| G. English | | | | | | | | | | |
| Taken or taking | 95 | 94 | 92 | 96 | 97 | 96 | 98 | 91 | 90 | 93 |
| Have not taken | 2 | 2 | 3 | 1 | 1 | 1 | 1 | 3 | 4 | 1 |
| Will take | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 4 | 3 | 5 |
| H. Social studies | | | | | | | | | | |
| Taken or taking | 88 | 88 | 86 | 89 | 89 | 90 | 89 | 83 | 81 | 86 |
| Have not taken | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 5 | 6 | 4 |
| Will take | 5 | 4 | 4 | 4 | 6 | 5 | 7 | 5 | 5 | 5 |
| I. Mechanical drawing | | | | | | | | | | |
| Taken or taking | 22 | 21 | 37 | 6 | 28 | 43 | 6 | 24 | 36 | 8 |
| Have not taken | 67 | 68 | 49 | 85 | 61 | 47 | 82 | 61 | 46 | 82 |
| Will take | 5 | 5 | 7 | 3 | 7 | 7 | 6 | 6 | 8 | 4 |
| J. Auto mechanics | | | | | | | | | | |
| Taken or taking | 11 | 11 | 18 | 4 | 10 | 15 | 3 | 17 | 23 | 9 |
| Have not taken | 73 | 72 | 59 | 85 | 74 | 66 | 86 | 62 | 52 | 76 |
| Will take | 9 | 9 | 14 | 4 | 9 | 11 | 5 | 12 | 17 | 6 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 93 | 93 | 94 | 91 | 94 | 90 | 88 | 88 | 89 | 91 | 91 | 89 | 87 | 88 | 82 | 90 | 93 | 94 | 92 |
| 7 | 7 | 7 | 8 | 5 | 9 | 9 | 8 | 10 | 8 | 8 | 9 | 12 | 10 | 17 | 9 | 6 | 4 | 8 |
| 1 | 1 | 0 | 3 | 3 | 2 | 2 | 4 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 |
| 75 | 75 | 77 | 64 | 73 | 59 | 64 | 65 | 63 | 70 | 68 | 75 | 60 | 66 | 46 | 64 | 74 | 78 | 72 |
| 15 | 15 | 16 | 25 | 18 | 29 | 27 | 23 | 30 | 20 | 22 | 16 | 30 | 23 | 44 | 26 | 19 | 15 | 22 |
| 7 | 7 | 6 | 8 | 7 | 8 | 6 | 8 | 4 | 6 | 6 | 8 | 7 | 8 | 7 | 7 | 4 | 5 | 4 |
| 36 | 37 | 33 | 23 | 32 | 19 | 23 | 27 | 20 | 34 | 35 | 29 | 22 | 26 | 16 | 21 | 28 | 33 | 24 |
| 30 | 30 | 30 | 53 | 39 | 59 | 58 | 52 | 62 | 34 | 35 | 33 | 53 | 45 | 69 | 50 | 51 | 45 | 55 |
| 29 | 27 | 36 | 19 | 24 | 17 | 15 | 15 | 15 | 24 | 23 | 29 | 20 | 23 | 9 | 24 | 18 | 19 | 18 |
| 82 | 81 | 89 | 88 | 88 | 88 | 85 | 84 | 85 | 81 | 81 | 82 | 84 | 86 | 80 | 85 | 85 | 85 | 86 |
| 10 | 11 | 5 | 5 | 5 | 6 | 9 | 8 | 10 | 13 | 14 | 13 | 8 | 7 | 12 | 7 | 8 | 7 | 8 |
| 4 | 4 | 3 | 4 | 5 | 4 | 4 | 5 | 3 | 2 | 2 | 3 | 5 | 4 | 5 | 5 | 4 | 7 | 3 |
| 48 | 49 | 45 | 47 | 52 | 44 | 36 | 42 | 32 | 43 | 45 | 35 | 41 | 47 | 37 | 37 | 42 | 50 | 35 |
| 27 | 27 | 27 | 24 | 18 | 27 | 42 | 33 | 47 | 33 | 31 | 37 | 31 | 26 | 38 | 31 | 37 | 29 | 43 |
| 21 | 19 | 27 | 26 | 26 | 26 | 18 | 18 | 18 | 18 | 17 | 24 | 25 | 23 | 24 | 29 | 16 | 16 | 16 |
| 28 | 29 | 23 | 16 | 23 | 12 | 15 | 19 | 11 | 25 | 26 | 19 | 16 | 19 | 13 | 13 | 15 | 21 | 12 |
| 37 | 35 | 44 | 51 | 40 | 56 | 63 | 54 | 70 | 41 | 39 | 47 | 53 | 47 | 62 | 53 | 59 | 52 | 65 |
| 29 | 29 | 30 | 27 | 32 | 25 | 17 | 21 | 13 | 26 | 26 | 27 | 25 | 28 | 18 | 29 | 18 | 21 | 16 |
| 96 | 95 | 99 | 97 | 96 | 98 | 98 | 96 | 99 | 95 | 95 | 95 | 96 | 95 | 95 | 99 | 97 | 96 | 98 |
| 1 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 1 | 2 | 1 | 1 | 1 | 2 | 0 | 1 | 2 | 1 |
| 1 | 1 | 1 | 2 | 2 | 2 | 3 | 4 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 4 |
| 91 | 91 | 90 | 91 | 91 | 91 | 91 | 88 | 93 | 89 | 89 | 89 | 89 | 89 | 91 | 89 | 92 | 92 | 93 |
| 2 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 4 | 2 | 4 | 3 | 5 | 4 | 3 | 4 | 1 |
| 5 | 4 | 8 | 5 | 5 | 5 | 4 | 5 | 3 | 5 | 5 | 7 | 6 | 6 | 2 | 8 | 4 | 4 | 5 |
| 39 | 48 | 7 | 12 | 29 | 4 | 15 | 30 | 5 | 41 | 49 | 12 | 17 | 34 | 5 | 5 | 12 | 23 | 5 |
| 47 | 40 | 73 | 79 | 60 | 88 | 76 | 59 | 87 | 46 | 40 | 69 | 74 | 55 | 90 | 85 | 79 | 67 | 88 |
| 10 | 9 | 15 | 4 | 7 | 3 | 4 | 7 | 2 | 9 | 7 | 14 | 5 | 7 | 1 | 5 | 3 | 6 | 1 |
| 11 | 13 | 1 | 6 | 11 | 4 | 9 | 12 | 6 | 13 | 16 | 3 | 7 | 12 | 5 | 3 | 5 | 7 | 4 |
| 73 | 67 | 91 | 82 | 73 | 86 | 79 | 69 | 87 | 68 | 63 | 87 | 79 | 68 | 88 | 85 | 83 | 79 | 86 |
| 10 | 12 | 4 | 6 | 10 | 4 | 6 | 11 | 2 | 10 | 12 | 3 | 6 | 11 | 2 | 4 | 5 | 7 | 3 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| K. Typewriting | | | | | | | | | | |
| Taken or taking | 63 | 64 | 50 | 76 | 56 | 49 | 68 | 62 | 54 | 74 |
| Have not taken | 21 | 20 | 32 | 10 | 24 | 32 | 13 | 23 | 29 | 14 |
| Will take | 12 | 12 | 11 | 12 | 16 | 14 | 19 | 10 | 9 | 12 |
| L. Bookkeeping | | | | | | | | | | |
| Taken or taking | 17 | 17 | 13 | 22 | 9 | 8 | 11 | 14 | 12 | 17 |
| Have not taken | 64 | 62 | 68 | 56 | 72 | 75 | 68 | 65 | 69 | 59 |
| Will take | 12 | 13 | 8 | 17 | 11 | 8 | 16 | 11 | 7 | 18 |
| M. Art | | | | | | | | | | |
| Taken or taking | 48 | 47 | 44 | 50 | 45 | 43 | 46 | 41 | 45 | 37 |
| Have not taken | 41 | 41 | 42 | 40 | 45 | 45 | 44 | 40 | 38 | 44 |
| Will take | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 5 | 7 |
| N. Home economics | | | | | | | | | | |
| Taken or taking | 42 | 45 | 15 | 73 | 31 | 10 | 61 | 41 | 16 | 75 |
| Have not taken | 46 | 43 | 68 | 20 | 57 | 74 | 31 | 44 | 65 | 15 |
| Will take | 7 | 6 | 8 | 5 | 6 | 7 | 6 | 10 | 10 | 9 |
| O. Band, orchestra | | | | | | | | | | |
| Taken or taking | 30 | 28 | 26 | 30 | 31 | 30 | 32 | 23 | 22 | 26 |
| Have not taken | 61 | 62 | 61 | 62 | 60 | 61 | 59 | 64 | 64 | 64 |
| Will take | 2 | 2 | 3 | 2 | 2 | 3 | 1 | 4 | 4 | 3 |
| P. Algebra | | | | | | | | | | |
| Like | 53 | 51 | 51 | 51 | 70 | 71 | 68 | 57 | 56 | 58 |
| Dislike | 35 | 37 | 37 | 37 | 25 | 25 | 26 | 30 | 31 | 29 |
| Q. Plane geometry | | | | | | | | | | |
| Like | 34 | 31 | 35 | 27 | 53 | 56 | 49 | 36 | 38 | 33 |
| Dislike | 37 | 39 | 37 | 42 | 29 | 27 | 32 | 35 | 33 | 37 |
| R. Trigonometry | | | | | | | | | | |
| Like | 18 | 16 | 20 | 13 | 37 | 40 | 31 | 21 | 23 | 17 |
| Dislike | 33 | 33 | 33 | 34 | 22 | 22 | 20 | 29 | 30 | 28 |
| S. Biology | | | | | | | | | | |
| Like | 62 | 61 | 59 | 64 | 70 | 68 | 73 | 69 | 64 | 76 |
| Dislike | 23 | 23 | 24 | 21 | 18 | 19 | 17 | 16 | 19 | 13 |
| T. Chemistry | | | | | | | | | | |
| Like | 28 | 26 | 29 | 22 | 44 | 48 | 37 | 35 | 35 | 35 |
| Dislike | 30 | 31 | 30 | 31 | 21 | 22 | 21 | 25 | 27 | 23 |
| U. Physics | | | | | | | | | | |
| Like | 17 | 16 | 20 | 13 | 33 | 37 | 27 | 24 | 26 | 20 |
| Dislike | 29 | 30 | 30 | 31 | 17 | 17 | 17 | 26 | 27 | 24 |
| V. English | | | | | | | | | | |
| Like | 65 | 67 | 54 | 79 | 65 | 56 | 79 | 70 | 61 | 82 |
| Dislike | 28 | 26 | 37 | 16 | 30 | 38 | 18 | 19 | 23 | 12 |
| W. Social studies | | | | | | | | | | |
| Like | 63 | 63 | 61 | 65 | 67 | 67 | 68 | 67 | 64 | 71 |
| Dislike | 26 | 26 | 26 | 27 | 24 | 24 | 23 | 20 | 19 | 20 |
| X. Mechanical drawing | | | | | | | | | | |
| Like | 27 | 26 | 40 | 13 | 37 | 50 | 18 | 29 | 40 | 13 |
| Dislike | 25 | 25 | 22 | 28 | 17 | 14 | 22 | 24 | 24 | 26 |
| Y. Auto mechanics | | | | | | | | | | |
| Like | 27 | 27 | 41 | 13 | 27 | 37 | 13 | 33 | 44 | 18 |
| Dislike | 19 | 19 | 13 | 26 | 18 | 15 | 22 | 17 | 14 | 22 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 56 | 52 | 69 | 65 | 52 | 72 | 67 | 57 | 74 | 50 | 46 | 65 | 61 | 48 | 67 | 71 | 66 | 58 | 72 |
| 25 | 29 | 13 | 17 | 27 | 12 | 17 | 26 | 11 | 30 | 34 | 14 | 20 | 31 | 14 | 12 | 19 | 26 | 13 |
| 14 | 14 | 14 | 16 | 17 | 16 | 15 | 15 | 15 | 15 | 13 | 21 | 16 | 15 | 16 | 17 | 15 | 15 | 15 |
| 9 | 9 | 7 | 11 | 8 | 13 | 13 | 9 | 16 | 8 | 8 | 7 | 10 | 8 | 13 | 10 | 11 | 9 | 12 |
| 74 | 75 | 73 | 72 | 73 | 71 | 72 | 75 | 70 | 73 | 73 | 74 | 72 | 74 | 73 | 70 | 73 | 77 | 70 |
| 11 | 8 | 19 | 11 | 11 | 11 | 10 | 7 | 11 | 10 | 8 | 15 | 12 | 11 | 10 | 15 | 10 | 6 | 12 |
| 41 | 41 | 42 | 45 | 41 | 47 | 44 | 40 | 46 | 42 | 43 | 39 | 47 | 43 | 47 | 53 | 44 | 43 | 46 |
| 48 | 47 | 50 | 45 | 47 | 44 | 46 | 49 | 43 | 46 | 45 | 48 | 44 | 44 | 45 | 41 | 46 | 51 | 43 |
| 6 | 6 | 5 | 4 | 5 | 4 | 4 | 3 | 5 | 6 | 6 | 6 | 4 | 6 | 4 | 3 | 4 | 1 | 6 |
| 21 | 10 | 56 | 52 | 15 | 71 | 44 | 14 | 65 | 19 | 10 | 56 | 46 | 12 | 75 | 66 | 40 | 8 | 62 |
| 67 | 76 | 37 | 36 | 70 | 22 | 47 | 71 | 30 | 67 | 74 | 36 | 43 | 72 | 19 | 28 | 51 | 80 | 31 |
| 7 | 7 | 6 | 6 | 7 | 5 | 6 | 10 | 4 | 7 | 6 | 8 | 6 | 9 | 5 | 5 | 5 | 7 | 4 |
| 33 | 32 | 34 | 35 | 33 | 37 | 30 | 29 | 31 | 30 | 28 | 37 | 31 | 30 | 34 | 31 | 30 | 30 | 31 |
| 59 | 59 | 61 | 57 | 56 | 57 | 62 | 60 | 63 | 59 | 61 | 53 | 61 | 61 | 60 | 61 | 62 | 63 | 62 |
| 2 | 3 | 0 | 3 | 5 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 3 | 5 | 1 | 2 | 2 | 1 | 3 |
| 80 | 79 | 85 | 65 | 68 | 64 | 56 | 56 | 57 | 75 | 74 | 79 | 62 | 64 | 56 | 65 | 58 | 58 | 57 |
| 16 | 18 | 10 | 30 | 28 | 31 | 37 | 39 | 35 | 21 | 23 | 15 | 30 | 29 | 36 | 28 | 37 | 38 | 36 |
| 67 | 66 | 68 | 45 | 55 | 40 | 39 | 43 | 36 | 58 | 56 | 65 | 43 | 51 | 32 | 45 | 46 | 50 | 44 |
| 20 | 19 | 21 | 35 | 29 | 37 | 40 | 38 | 42 | 26 | 28 | 18 | 33 | 28 | 39 | 34 | 39 | 36 | 41 |
| 51 | 49 | 55 | 25 | 36 | 20 | 22 | 27 | 19 | 44 | 43 | 47 | 25 | 33 | 13 | 25 | 25 | 27 | 24 |
| 15 | 16 | 10 | 26 | 22 | 28 | 28 | 31 | 27 | 20 | 23 | 8 | 26 | 21 | 34 | 26 | 27 | 29 | 25 |
| 71 | 71 | 71 | 84 | 85 | 84 | 70 | 70 | 69 | 64 | 64 | 63 | 78 | 80 | 73 | 81 | 67 | 63 | 69 |
| 18 | 17 | 23 | 7 | 7 | 7 | 20 | 21 | 20 | 25 | 25 | 25 | 10 | 9 | 14 | 9 | 24 | 26 | 22 |
| 51 | 52 | 50 | 47 | 52 | 44 | 30 | 38 | 25 | 48 | 50 | 42 | 41 | 46 | 35 | 40 | 34 | 41 | 29 |
| 19 | 18 | 23 | 20 | 19 | 20 | 31 | 29 | 33 | 21 | 22 | 18 | 22 | 20 | 26 | 20 | 28 | 27 | 29 |
| 42 | 45 | 33 | 24 | 33 | 20 | 18 | 24 | 15 | 40 | 41 | 33 | 24 | 30 | 16 | 23 | 19 | 21 | 18 |
| 17 | 13 | 27 | 22 | 21 | 23 | 25 | 25 | 25 | 17 | 16 | 19 | 23 | 20 | 29 | 22 | 22 | 24 | 21 |
| 58 | 53 | 77 | 75 | 67 | 79 | 82 | 75 | 86 | 59 | 54 | 76 | 69 | 60 | 73 | 77 | 84 | 75 | 91 |
| 36 | 41 | 20 | 21 | 28 | 17 | 15 | 21 | 11 | 36 | 40 | 22 | 25 | 33 | 22 | 17 | 13 | 20 | 7 |
| 65 | 64 | 67 | 69 | 69 | 70 | 78 | 80 | 77 | 64 | 65 | 61 | 66 | 64 | 64 | 69 | 79 | 81 | 78 |
| 28 | 27 | 30 | 22 | 21 | 23 | 15 | 11 | 17 | 28 | 27 | 30 | 24 | 23 | 27 | 22 | 15 | 11 | 17 |
| 52 | 59 | 30 | 19 | 35 | 11 | 18 | 26 | 12 | 52 | 56 | 35 | 23 | 38 | 12 | 14 | 14 | 21 | 9 |
| 14 | 13 | 19 | 26 | 24 | 27 | 26 | 29 | 24 | 14 | 14 | 14 | 24 | 21 | 28 | 25 | 27 | 27 | 26 |
| 32 | 37 | 15 | 19 | 32 | 12 | 20 | 30 | 14 | 36 | 41 | 16 | 20 | 32 | 10 | 13 | 15 | 21 | 12 |
| 18 | 15 | 28 | 22 | 17 | 25 | 19 | 16 | 21 | 16 | 15 | 22 | 22 | 15 | 28 | 25 | 19 | 16 | 21 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| Z. Typewriting | | | | | | | | | | |
| Like | 55 | 55 | 39 | 70 | 47 | 38 | 61 | 58 | 47 | 73 |
| Dislike | 20 | 22 | 30 | 14 | 25 | 29 | 19 | 19 | 25 | 12 |
| AA. Bookkeeping | | | | | | | | | | |
| Like | 24 | 25 | 17 | 32 | 17 | 15 | 20 | 26 | 22 | 33 |
| Dislike | 26 | 24 | 30 | 19 | 27 | 31 | 21 | 24 | 30 | 15 |
| BB. Art | | | | | | | | | | |
| Like | 49 | 49 | 43 | 54 | 50 | 47 | 54 | 51 | 51 | 50 |
| Dislike | 19 | 18 | 21 | 15 | 18 | 21 | 13 | 15 | 16 | 14 |
| CC. Home economics | | | | | | | | | | |
| Like | 42 | 44 | 21 | 65 | 33 | 18 | 55 | 44 | 23 | 74 |
| Dislike | 21 | 21 | 28 | 15 | 25 | 29 | 18 | 22 | 30 | 11 |
| DD. Band, orchestra | | | | | | | | | | |
| Like | 28 | 28 | 24 | 32 | 31 | 28 | 35 | 29 | 24 | 36 |
| Dislike | 28 | 27 | 31 | 23 | 27 | 32 | 20 | 27 | 34 | 18 |
| 13. In your home, how <u>many</u> of these things do you have? | | | | | | | | | | |
| Mechanics tool kit | 74 | 75 | 78 | 71 | 78 | 79 | 75 | 71 | 73 | 70 |
| Power tools (saw, drill, etc.) | 80 | 79 | 81 | 76 | 83 | 84 | 82 | 63 | 68 | 56 |
| 3 to 4 bookcases full of books (250+) | 61 | 59 | 56 | 62 | 69 | 64 | 78 | 56 | 52 | 62 |
| Sewing machine | 87 | 85 | 80 | 90 | 86 | 82 | 92 | 79 | 72 | 89 |
| Voltmeter | 30 | 30 | 36 | 24 | 37 | 42 | 30 | 27 | 29 | 23 |
| Pocket or desk calculator | 48 | 45 | 47 | 42 | 54 | 55 | 53 | 36 | 39 | 33 |
| Ham radio | 21 | 21 | 22 | 20 | 17 | 17 | 17 | 30 | 32 | 28 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 48 | 43 | 67 | 57 | 45 | 63 | 57 | 45 | 65 | 42 | 36 | 67 | 52 | 39 | 63 | 59 | 58 | 46 | 67 |
| 26 | 28 | 19 | 19 | 27 | 15 | 22 | 28 | 18 | 28 | 31 | 18 | 21 | 28 | 12 | 19 | 19 | 24 | 16 |
| 19 | 18 | 21 | 20 | 16 | 22 | 18 | 13 | 22 | 16 | 15 | 20 | 19 | 16 | 25 | 19 | 18 | 14 | 21 |
| 28 | 28 | 25 | 23 | 29 | 20 | 25 | 31 | 20 | 32 | 35 | 23 | 23 | 26 | 20 | 22 | 21 | 23 | 19 |
| 46 | 44 | 52 | 51 | 46 | 53 | 50 | 44 | 54 | 47 | 47 | 47 | 51 | 45 | 50 | 60 | 47 | 39 | 53 |
| 20 | 22 | 15 | 17 | 20 | 15 | 15 | 19 | 12 | 20 | 22 | 14 | 17 | 19 | 19 | 12 | 17 | 22 | 13 |
| 27 | 17 | 58 | 47 | 24 | 59 | 43 | 25 | 56 | 25 | 17 | 56 | 44 | 20 | 65 | 54 | 38 | 21 | 51 |
| 27 | 30 | 16 | 20 | 24 | 18 | 20 | 23 | 18 | 29 | 33 | 17 | 20 | 24 | 16 | 20 | 22 | 20 | 24 |
| 32 | 31 | 36 | 36 | 31 | 38 | 31 | 27 | 35 | 28 | 28 | 30 | 31 | 26 | 36 | 33 | 31 | 28 | 33 |
| 27 | 28 | 23 | 22 | 27 | 20 | 21 | 27 | 17 | 33 | 34 | 28 | 23 | 27 | 20 | 21 | 21 | 24 | 19 |
| 79 | 80 | 74 | 76 | 77 | 75 | 70 | 73 | 67 | 80 | 80 | 80 | 77 | 81 | 70 | 76 | 68 | 71 | 66 |
| 84 | 85 | 82 | 80 | 81 | 80 | 75 | 79 | 72 | 86 | 86 | 87 | 81 | 83 | 77 | 82 | 75 | 78 | 73 |
| 66 | 65 | 72 | 70 | 68 | 71 | 74 | 73 | 74 | 64 | 62 | 72 | 69 | 70 | 59 | 77 | 75 | 78 | 73 |
| 86 | 83 | 94 | 89 | 81 | 93 | 86 | 77 | 92 | 85 | 82 | 96 | 88 | 83 | 92 | 91 | 86 | 78 | 92 |
| 41 | 46 | 27 | 29 | 33 | 27 | 30 | 36 | 26 | 41 | 43 | 33 | 32 | 38 | 27 | 29 | 30 | 38 | 24 |
| 59 | 60 | 52 | 50 | 55 | 47 | 49 | 54 | 45 | 54 | 54 | 54 | 49 | 54 | 41 | 49 | 52 | 59 | 46 |
| 17 | 17 | 17 | 18 | 18 | 19 | 14 | 12 | 16 | 16 | 17 | 13 | 18 | 17 | 19 | 19 | 12 | 10 | 14 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 14. This question deals with accomplishments that might possibly apply to your Jr. -Sr. High School years. It covers many areas of interest and few students will be able to say "yes" to many items. (Mark all that apply.) | | | | | | | | | | |
| Had a major part in a play | 16 | 18 | 17 | 18 | 18 | 19 | 18 | 24 | 23 | 27 |
| Won a prize or award in an art competition | 9 | 9 | 9 | 10 | 8 | 7 | 9 | 16 | 19 | 12 |
| Took part in a National Science Foundation program | 5 | 5 | 5 | 4 | 7 | 8 | 6 | 8 | 9 | 5 |
| Entered a project in a science fair | 20 | 19 | 20 | 19 | 26 | 27 | 25 | 23 | 23 | 22 |
| Achieved recognition for a 4-H project | 12 | 13 | 9 | 17 | 12 | 8 | 17 | 12 | 11 | 14 |
| Received a high rating in a state or regional music contest | 10 | 10 | 8 | 11 | 10 | 10 | 10 | 8 | 8 | 8 |
| Participated in a state or regional speech debate contest | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 6 | 7 | 4 |
| Edited a school paper, yearbook, or literary magazine | 12 | 13 | 10 | 16 | 15 | 12 | 19 | 19 | 18 | 22 |
| Active participant in scouting | 14 | 15 | 18 | 13 | 21 | 24 | 17 | 17 | 20 | 12 |
| Am a member of a scholastic honor society | 14 | 13 | 11 | 16 | 21 | 19 | 24 | 20 | 17 | 23 |
| Elected to student or public office | 20 | 22 | 19 | 25 | 24 | 23 | 27 | 30 | 28 | 32 |
| Achieved recognition for mathematics | 7 | 6 | 7 | 5 | 12 | 12 | 12 | 15 | 16 | 13 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 20 | 19 | 23 | 20 | 21 | 20 | 24 | 22 | 25 | 19 | 16 | 29 | 17 | 18 | 15 | 18 | 24 | 25 | 23 |
| 8 | 8 | 7 | 9 | 9 | 9 | 9 | 6 | 10 | 7 | 7 | 7 | 9 | 9 | 7 | 10 | 8 | 5 | 9 |
| 8 | 7 | 9 | 6 | 7 | 6 | 6 | 6 | 5 | 8 | 7 | 8 | 7 | 7 | 5 | 8 | 5 | 5 | 4 |
| 24 | 22 | 31 | 23 | 25 | 22 | 22 | 21 | 22 | 27 | 25 | 35 | 23 | 25 | 22 | 22 | 20 | 21 | 20 |
| 9 | 7 | 15 | 13 | 8 | 16 | 12 | 6 | 15 | 10 | 7 | 18 | 14 | 9 | 17 | 19 | 8 | 5 | 10 |
| 14 | 13 | 15 | 11 | 8 | 12 | 12 | 9 | 14 | 12 | 10 | 16 | 8 | 7 | 9 | 10 | 11 | 7 | 14 |
| 3 | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 4 | 3 | 5 | 3 | 4 | 2 | 4 | 8 | 7 | 8 |
| 16 | 16 | 19 | 16 | 15 | 17 | 19 | 14 | 22 | 14 | 12 | 25 | 14 | 11 | 15 | 16 | 20 | 16 | 22 |
| 22 | 23 | 17 | 18 | 23 | 16 | 17 | 21 | 14 | 22 | 23 | 20 | 18 | 24 | 12 | 15 | 16 | 17 | 15 |
| 24 | 21 | 34 | 21 | 19 | 22 | 20 | 18 | 22 | 20 | 18 | 28 | 20 | 17 | 17 | 25 | 26 | 20 | 30 |
| 24 | 23 | 27 | 29 | 27 | 30 | 34 | 34 | 34 | 21 | 19 | 29 | 26 | 25 | 26 | 28 | 32 | 32 | 31 |
| 17 | 16 | 20 | 7 | 8 | 6 | 7 | 8 | 6 | 14 | 13 | 18 | 7 | 9 | 4 | 9 | 8 | 9 | 8 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 15. Examine the activities listed below and indicate by marking responses for any that you can now do reasonably well. (Mark as many as apply.) | | | | | | | | | | |
| Use wook shop power tools (power saw, drill, lathe, etc.) | 45 | 45 | 75 | 16 | 51 | 73 | 18 | 49 | 73 | 15 |
| Make mechanical drawings | 24 | 21 | 38 | 6 | 33 | 48 | 9 | 23 | 36 | 5 |
| Use a voltmeter | 19 | 18 | 33 | 4 | 25 | 38 | 6 | 20 | 31 | 6 |
| Use logarithmic tables | 18 | 16 | 20 | 13 | 32 | 36 | 25 | 20 | 23 | 15 |
| Use a slide rule to multiply and divide | 31 | 32 | 37 | 28 | 46 | 53 | 35 | 45 | 48 | 40 |
| Use a microscope | 76 | 76 | 77 | 74 | 85 | 87 | 82 | 77 | 75 | 79 |
| Describe the function of the blood stream | 37 | 35 | 39 | 32 | 53 | 55 | 51 | 39 | 40 | 37 |
| Interpret simple chemical formulae | 31 | 29 | 34 | 24 | 51 | 57 | 42 | 31 | 31 | 30 |
| Make handicrafts, (weaving, Carving, pottery, leather tooling) | 49 | 51 | 42 | 59 | 51 | 41 | 65 | 49 | 45 | 53 |
| Play a musical instrument | 43 | 41 | 36 | 46 | 48 | 43 | 55 | 42 | 39 | 46 |
| Design clothing, posters, furniture, etc. | 36 | 36 | 22 | 49 | 35 | 25 | 51 | 38 | 28 | 52 |
| Type 40 words a minute | 40 | 41 | 26 | 55 | 35 | 28 | 45 | 41 | 33 | 52 |
| 16. Mark the appropriate age at which you would most like to marry. | | | | | | | | | | |
| Less than 18 | 3 | 3 | 2 | 4 | 1 | 1 | 2 | 4 | 4 | 4 |
| 18 to 21 | 30 | 30 | 22 | 38 | 19 | 15 | 23 | 21 | 15 | 29 |
| 22 to 25 | 45 | 45 | 47 | 43 | 54 | 54 | 54 | 43 | 42 | 45 |
| 26 to 28 | 10 | 9 | 11 | 7 | 14 | 14 | 12 | 16 | 18 | 13 |
| Over 28 | 4 | 4 | 6 | 2 | 4 | 7 | 1 | 6 | 9 | 2 |
| Don't plan to marry | 8 | 8 | 11 | 6 | 7 | 8 | 6 | 14 | 19 | 7 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | | Non-Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 65 | 77 | 21 | 37 | 73 | 18 | 34 | 61 | 16 | 63 | 74 | 19 | 43 | 78 | 16 | 22 | 29 | 54 | 11 |
| 46 | 53 | 19 | 14 | 33 | 4 | 12 | 24 | 3 | 48 | 56 | 20 | 18 | 36 | 6 | 5 | 11 | 22 | 3 |
| 34 | 43 | 5 | 13 | 28 | 5 | 14 | 26 | 6 | 35 | 42 | 10 | 16 | 32 | 3 | 6 | 16 | 31 | 5 |
| 44 | 45 | 40 | 25 | 31 | 23 | 23 | 27 | 21 | 35 | 36 | 32 | 23 | 29 | 16 | 23 | 29 | 34 | 26 |
| 57 | 60 | 45 | 44 | 49 | 41 | 37 | 44 | 32 | 52 | 55 | 42 | 40 | 44 | 34 | 39 | 36 | 41 | 32 |
| 88 | 88 | 88 | 88 | 92 | 87 | 82 | 85 | 79 | 86 | 86 | 84 | 84 | 89 | 78 | 84 | 81 | 86 | 77 |
| 55 | 55 | 57 | 60 | 66 | 57 | 46 | 52 | 43 | 52 | 52 | 52 | 52 | 57 | 42 | 55 | 50 | 55 | 46 |
| 57 | 58 | 56 | 54 | 62 | 50 | 41 | 51 | 33 | 53 | 54 | 48 | 47 | 54 | 39 | 44 | 46 | 58 | 37 |
| 46 | 41 | 64 | 54 | 42 | 61 | 49 | 36 | 57 | 46 | 41 | 66 | 54 | 44 | 52 | 68 | 45 | 31 | 55 |
| 48 | 47 | 53 | 54 | 48 | 57 | 48 | 39 | 54 | 44 | 42 | 54 | 48 | 41 | 49 | 56 | 50 | 40 | 57 |
| 30 | 25 | 48 | 39 | 22 | 47 | 36 | 22 | 45 | 32 | 27 | 50 | 38 | 23 | 45 | 51 | 35 | 19 | 46 |
| 35 | 31 | 46 | 45 | 35 | 51 | 43 | 28 | 52 | 29 | 26 | 43 | 41 | 28 | 49 | 48 | 44 | 32 | 53 |
| 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 0 | 0 | 1 | 2 | 2 | 4 | 2 | 1 | 1 | 1 |
| 17 | 16 | 22 | 22 | 13 | 28 | 20 | 14 | 24 | 19 | 17 | 26 | 24 | 15 | 35 | 27 | 17 | 13 | 19 |
| 53 | 53 | 55 | 54 | 55 | 53 | 54 | 53 | 55 | 52 | 53 | 49 | 51 | 52 | 52 | 48 | 55 | 57 | 54 |
| 13 | 12 | 14 | 13 | 17 | 10 | 14 | 17 | 11 | 13 | 13 | 13 | 12 | 15 | 4 | 15 | 16 | 16 | 15 |
| 5 | 6 | 1 | 2 | 4 | 1 | 4 | 7 | 2 | 5 | 6 | 0 | 3 | 5 | 1 | 2 | 5 | 8 | 3 |
| 9 | 9 | 6 | 5 | 8 | 4 | 6 | 7 | 5 | 8 | 8 | 7 | 6 | 10 | 2 | 5 | 6 | 6 | 6 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 17. If and when you marry, do you think you (females) or your wife (males) will be employed? | | | | | | | | | | |
| Will not work at any time | 5 | 5 | 9 | 2 | 5 | 7 | 1 | 6 | 11 | 1 |
| Will work no more than part-time | 15 | 14 | 16 | 12 | 14 | 17 | 9 | 10 | 12 | 8 |
| Will work full-time before having children, and when children are at least school age | 32 | 33 | 20 | 46 | 32 | 21 | 48 | 35 | 25 | 49 |
| Will work full-time without interruption | 10 | 10 | 9 | 11 | 12 | 9 | 17 | 14 | 12 | 16 |
| Don't know | 32 | 31 | 37 | 24 | 32 | 39 | 21 | 27 | 31 | 22 |
| Don't plan to marry | 6 | 6 | 8 | 4 | 6 | 7 | 5 | 10 | 13 | 6 |
| 18. Which <u>one</u> of these do you approve for <u>most</u> women? (Mark only ONE.) | | | | | | | | | | |
| Marriage and/or family only | 25 | 25 | 33 | 18 | 23 | 31 | 12 | 17 | 23 | 8 |
| Marriage and/or family and career | 68 | 67 | 57 | 77 | 69 | 61 | 83 | 70 | 63 | 81 |
| Career only | 3 | 4 | 4 | 3 | 3 | 4 | 3 | 7 | 7 | 7 |
| 19. How many times did you talk about training or education after high school with your guidance counselor during the past year? | | | | | | | | | | |
| Never | 39 | 35 | 37 | 33 | 33 | 34 | 32 | 31 | 36 | 22 |
| Once or twice | 35 | 36 | 33 | 38 | 35 | 33 | 38 | 35 | 33 | 37 |
| Three or four times | 14 | 15 | 15 | 14 | 17 | 16 | 17 | 16 | 14 | 19 |
| Five times or more | 9 | 10 | 10 | 10 | 13 | 13 | 11 | 18 | 16 | 20 |
| 20. How many times did you talk about jobs or occupations with your guidance counselor during the past year? | | | | | | | | | | |
| Never | 46 | 42 | 43 | 42 | 45 | 45 | 45 | 35 | 39 | 30 |
| Once or twice | 34 | 34 | 32 | 36 | 32 | 31 | 32 | 30 | 31 | 30 |
| Three or four times | 8 | 9 | 9 | 9 | 11 | 10 | 11 | 13 | 11 | 16 |
| Five times or more | 5 | 6 | 6 | 5 | 4 | 4 | 4 | 10 | 11 | 9 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 5 | 6 | 1 | 3 | 8 | 1 | 4 | 7 | 2 | 6 | 7 | 0 | 4 | 8 | 1 | 1 | 3 | 5 | 1 |
| 16 | 17 | 13 | 10 | 15 | 7 | 12 | 15 | 10 | 15 | 17 | 7 | 11 | 15 | 10 | 8 | 13 | 17 | 10 |
| 26 | 18 | 51 | 41 | 19 | 52 | 39 | 23 | 50 | 27 | 20 | 54 | 37 | 19 | 55 | 45 | 36 | 20 | 48 |
| 9 | 7 | 13 | 14 | 10 | 17 | 9 | 6 | 11 | 9 | 9 | 12 | 12 | 9 | 11 | 17 | 10 | 5 | 13 |
| 35 | 41 | 18 | 27 | 41 | 20 | 31 | 43 | 23 | 35 | 38 | 22 | 30 | 40 | 21 | 25 | 33 | 48 | 22 |
| 8 | 9 | 6 | 4 | 5 | 3 | 4 | 5 | 3 | 7 | 8 | 6 | 5 | 8 | 2 | 4 | 4 | 3 | 5 |
| 27 | 30 | 16 | 18 | 30 | 12 | 18 | 25 | 12 | 28 | 31 | 13 | 20 | 29 | 14 | 13 | 17 | 28 | 9 |
| 65 | 61 | 79 | 77 | 65 | 84 | 77 | 67 | 84 | 65 | 60 | 83 | 75 | 64 | 83 | 82 | 78 | 63 | 88 |
| 4 | 4 | 2 | 2 | 1 | 2 | 2 | 3 | 1 | 3 | 4 | 2 | 2 | 2 | 1 | 3 | 2 | 3 | 1 |
| 32 | 33 | 27 | 29 | 32 | 27 | 26 | 28 | 25 | 34 | 35 | 32 | 31 | 34 | 26 | 32 | 25 | 22 | 27 |
| 35 | 33 | 42 | 36 | 33 | 38 | 38 | 37 | 39 | 37 | 35 | 43 | 35 | 32 | 36 | 39 | 37 | 36 | 38 |
| 16 | 16 | 16 | 8 | 19 | 18 | 18 | 15 | 20 | 15 | 15 | 14 | 18 | 19 | 17 | 16 | 18 | 17 | 19 |
| 15 | 15 | 15 | 14 | 13 | 14 | 14 | 16 | 13 | 12 | 13 | 11 | 12 | 11 | 15 | 11 | 16 | 19 | 15 |
| 45 | 45 | 43 | 42 | 45 | 40 | 41 | 42 | 40 | 45 | 45 | 47 | 42 | 44 | 40 | 43 | 46 | 46 | 45 |
| 32 | 32 | 34 | 35 | 34 | 35 | 37 | 36 | 37 | 31 | 31 | 29 | 34 | 32 | 37 | 36 | 32 | 31 | 32 |
| 9 | 9 | 12 | 10 | 9 | 10 | 9 | 9 | 9 | 10 | 10 | 11 | 9 | 10 | 8 | 8 | 8 | 8 | 9 |
| 6 | 6 | 6 | 5 | 3 | 6 | 6 | 5 | 6 | 5 | 4 | 8 | 4 | 3 | 6 | 4 | 4 | 4 | 4 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 21. In the past year, did you talk about jobs, work, or careers with any of these? (Mark as many as apply.) | | | | | | | | | | |
| Member(s) of my family | 88 | 86 | 83 | 89 | 91 | 89 | 94 | 79 | 72 | 88 |
| Teacher(s) | 39 | 39 | 37 | 41 | 44 | 45 | 43 | 45 | 39 | 53 |
| My friend(s) | 83 | 81 | 75 | 87 | 84 | 81 | 89 | 79 | 75 | 85 |
| Worker(s) about how he/she came to be in the job | 35 | 34 | 33 | 34 | 37 | 36 | 39 | 34 | 33 | 36 |
| Class discussion(s) | 23 | 24 | 21 | 27 | 26 | 25 | 27 | 32 | 26 | 41 |
| 22. In the past year, did you do any of these things? (Mark as many as apply.) | | | | | | | | | | |
| At a library, read something related to jobs or work | 36 | 35 | 33 | 37 | 42 | 40 | 45 | 45 | 41 | 50 |
| Had a course in school in occupations or careers | 27 | 25 | 23 | 28 | 22 | 21 | 22 | 27 | 23 | 34 |
| Took a field trip to a local business or industry to observe workers | 25 | 24 | 25 | 24 | 23 | 26 | 20 | 34 | 36 | 30 |
| Attended a "career" or "job" fair where job materials were displayed and business representatives talked | 16 | 16 | 16 | 16 | 18 | 18 | 17 | 21 | 18 | 24 |
| Had a job interview | 34 | 33 | 34 | 33 | 35 | 37 | 32 | 34 | 36 | 31 |
| Filled out job application | 49 | 48 | 47 | 49 | 48 | 48 | 47 | 54 | 55 | 54 |
| Sought information from the school career file or occupational library | 25 | 25 | 22 | 28 | 28 | 25 | 33 | 31 | 26 | 38 |
| 23. Which <u>one</u> of these types of work would you <u>most</u> prefer to do in your future employment? (Mark only ONE.) | | | | | | | | | | |
| Service, maintain or repair things | 12 | 12 | 22 | 2 | 10 | 15 | 3 | 15 | 23 | 4 |
| Serve others | 28 | 29 | 15 | 43 | 21 | 12 | 36 | 26 | 17 | 38 |
| Make or build things, grow things | 17 | 16 | 23 | 10 | 20 | 24 | 15 | 15 | 18 | 10 |
| Manage or direct people or work | 16 | 16 | 19 | 14 | 14 | 17 | 11 | 17 | 20 | 13 |
| Teach or instruct | 15 | 15 | 10 | 20 | 9 | 6 | 13 | 14 | 10 | 20 |
| Do theoretical or research work | 10 | 10 | 11 | 8 | 28 | 29 | 26 | 17 | 18 | 15 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 89 | 89 | 89 | 94 | 92 | 95 | 92 | 90 | 93 | 88 | 87 | 90 | 93 | 91 | 93 | 95 | 94 | 92 | 95 |
| 47 | 46 | 52 | 47 | 46 | 48 | 48 | 48 | 47 | 44 | 43 | 47 | 45 | 46 | 45 | 45 | 50 | 50 | 49 |
| 82 | 79 | 93 | 87 | 80 | 91 | 90 | 86 | 93 | 82 | 80 | 88 | 87 | 82 | 91 | 91 | 91 | 87 | 93 |
| 37 | 36 | 40 | 40 | 36 | 42 | 38 | 39 | 38 | 34 | 35 | 33 | 38 | 36 | 39 | 39 | 37 | 37 | 38 |
| 25 | 24 | 30 | 26 | 25 | 27 | 28 | 26 | 30 | 25 | 23 | 31 | 26 | 25 | 32 | 24 | 32 | 32 | 32 |
| 41 | 41 | 42 | 44 | 43 | 44 | 41 | 37 | 43 | 39 | 38 | 44 | 42 | 42 | 42 | 43 | 43 | 40 | 45 |
| 23 | 23 | 20 | 21 | 16 | 23 | 21 | 17 | 24 | 24 | 24 | 22 | 23 | 21 | 28 | 20 | 18 | 15 | 21 |
| 27 | 28 | 22 | 22 | 18 | 24 | 20 | 21 | 19 | 26 | 27 | 23 | 23 | 25 | 27 | 19 | 19 | 23 | 16 |
| 18 | 19 | 17 | 19 | 18 | 19 | 16 | 18 | 15 | 17 | 17 | 21 | 19 | 19 | 20 | 19 | 15 | 15 | 15 |
| 35 | 37 | 28 | 34 | 37 | 33 | 38 | 37 | 39 | 35 | 36 | 28 | 32 | 34 | 30 | 31 | 38 | 40 | 37 |
| 49 | 49 | 48 | 48 | 48 | 48 | 51 | 50 | 52 | 47 | 48 | 43 | 47 | 47 | 48 | 46 | 51 | 54 | 48 |
| 28 | 28 | 27 | 33 | 28 | 36 | 31 | 26 | 33 | 25 | 25 | 24 | 32 | 27 | 36 | 35 | 28 | 23 | 32 |
| 6 | 8 | 1 | 3 | 5 | 2 | 2 | 4 | 1 | 16 | 19 | 2 | 5 | 9 | 2 | 3 | 2 | 4 | 0 |
| 7 | 5 | 14 | 48 | 30 | 56 | 43 | 37 | 47 | 8 | 5 | 20 | 42 | 24 | 72 | 40 | 35 | 31 | 38 |
| 30 | 30 | 29 | 7 | 13 | 4 | 7 | 7 | 6 | 30 | 29 | 31 | 15 | 25 | 1 | 15 | 6 | 5 | 6 |
| 17 | 18 | 12 | 8 | 10 | 7 | 17 | 22 | 14 | 15 | 16 | 14 | 10 | 14 | 9 | 6 | 18 | 22 | 16 |
| 8 | 5 | 18 | 7 | 8 | 7 | 16 | 13 | 18 | 9 | 6 | 18 | 7 | 6 | 7 | 9 | 21 | 17 | 23 |
| 30 | 31 | 28 | 26 | 33 | 21 | 14 | 17 | 12 | 27 | 26 | 28 | 20 | 25 | 7 | 26 | 18 | 23 | 15 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 24. Which one of these types of work do you think your parents most prefer for you? (Mark only ONE.) | | | | | | | | | | |
| Service, maintain or repair things | 10 | 10 | 18 | 2 | 8 | 12 | 2 | 14 | 21 | 5 |
| Serve others | 24 | 24 | 14 | 34 | 19 | 13 | 27 | 20 | 12 | 30 |
| Make or build things, grow things | 13 | 13 | 19 | 7 | 14 | 16 | 11 | 13 | 18 | 7 |
| Manage or direct people or work | 18 | 18 | 21 | 15 | 20 | 25 | 13 | 18 | 21 | 14 |
| Teach or instruct | 16 | 16 | 10 | 22 | 10 | 6 | 16 | 20 | 14 | 29 |
| Do theoretical or research work | 10 | 9 | 11 | 8 | 20 | 20 | 21 | 15 | 17 | 13 |
| 25. In which one of these job families would you most prefer to be employed in the future? (Mark only ONE.) | | | | | | | | | | |
| General labor, community, and public service | 8 | 8 | 8 | 8 | 3 | 3 | 4 | 7 | 7 | 7 |
| Secretarial-clerical, office work | 12 | 14 | 2 | 25 | 2 | 1 | 4 | 10 | 5 | 18 |
| Construction trades | 6 | 6 | 12 | 1 | 4 | 6 | 2 | 9 | 13 | 3 |
| Mechanics, industrial trades | 10 | 10 | 20 | 1 | 7 | 11 | 1 | 14 | 22 | 4 |
| Proprietors, sales | 3 | 3 | 4 | 3 | 2 | 2 | 1 | 5 | 6 | 4 |
| Technical jobs | 6 | 5 | 8 | 3 | 5 | 8 | 1 | 9 | 13 | 3 |
| Fine arts, performing arts | 9 | 9 | 7 | 11 | 4 | 4 | 5 | 9 | 8 | 10 |
| Humanities, law, social and behavioral sciences | 9 | 9 | 8 | 10 | 13 | 7 | 22 | 11 | 11 | 12 |
| General teaching and social service | 9 | 9 | 5 | 12 | 3 | 3 | 4 | 8 | 7 | 9 |
| Business administration | 6 | 6 | 8 | 5 | 2 | 2 | 1 | 8 | 11 | 4 |
| Medical and biological sciences | 14 | 14 | 10 | 17 | 28 | 20 | 39 | 20 | 13 | 30 |
| Engineering, physical science, mathematics, and architecture | 9 | 8 | 12 | 4 | 31 | 41 | 17 | 14 | 18 | 8 |

| Job Family Preference | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 7 | 8 | 2 | 3 | 5 | 1 | 2 | 4 | 1 | 14 | 17 | 2 | 4 | 6 | 3 | 1 | 2 | 4 | 0 |
| 8 | 6 | 13 | 44 | 30 | 51 | 31 | 28 | 34 | 8 | 7 | 13 | 40 | 26 | 64 | 35 | 28 | 25 | 29 |
| 21 | 22 | 19 | 6 | 10 | 3 | 4 | 4 | 3 | 19 | 19 | 20 | 10 | 17 | 1 | 11 | 4 | 4 | 4 |
| 22 | 25 | 11 | 10 | 14 | 8 | 21 | 25 | 19 | 23 | 26 | 15 | 13 | 17 | 10 | 9 | 22 | 28 | 18 |
| 10 | 6 | 23 | 8 | 6 | 9 | 17 | 14 | 20 | 9 | 6 | 24 | 9 | 6 | 9 | 13 | 20 | 17 | 22 |
| 24 | 24 | 25 | 20 | 28 | 16 | 12 | 13 | 11 | 20 | 19 | 24 | 17 | 21 | 8 | 19 | 14 | 15 | 14 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 3 | 6 | 5 | 8 | 5 | 3 | 3 | 4 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 2 | 6 | 5 | 3 | 0 | 5 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 8 | 6 | 2 | 5 | 1 | 0 | 1 | 2 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 14 | 3 | 3 | 6 | 0 | 1 | 1 | 2 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 1 | 2 | 1 | 0 | 1 | 0 | 2 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 9 | 4 | 3 | 5 | 1 | 1 | 1 | 2 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 7 | 3 | 2 | 2 | 5 | 10 | 8 | 11 |
| 0 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 100 | 3 | 2 | 5 | 6 | 5 | 4 | 8 | 61 | 62 | 60 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 4 | 2 | 2 | 3 | 2 | 9 | 9 | 9 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 4 | 1 |
| 0 | 0 | 0 | 100 | 100 | 100 | 0 | 0 | 0 | 4 | 4 | 7 | 62 | 53 | 72 | 65 | 4 | 5 | 3 |
| 100 | 100 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 57 | 62 | 5 | 8 | 2 | 5 | 2 | 4 | 1 |

Total National Sample

| | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | M | F | Total | M | F | Total | M | F |
| 26. Which of these do you think are highly important in a job or position? (Mark as many as apply.) | | | | | | | | | |
| A secure job or future | 66 | 65 | 65 | 65 | 71 | 71 | 70 | 60 | 58 | 62 |
| High wages or salary | 48 | 48 | 53 | 44 | 53 | 57 | 47 | 54 | 56 | 51 |
| Chance to use skills and abilities fully | 60 | 58 | 55 | 60 | 66 | 65 | 67 | 59 | 55 | 64 |
| Chance to increase skills and abilities, to grow | 63 | 60 | 56 | 64 | 66 | 63 | 71 | 57 | 54 | 61 |
| Work which seems important to me | 59 | 57 | 51 | 62 | 64 | 60 | 69 | 48 | 43 | 55 |
| Opportunity for adventure | 38 | 37 | 37 | 38 | 43 | 42 | 45 | 35 | 35 | 36 |
| Opportunity to be creative, original | 37 | 35 | 31 | 39 | 44 | 41 | 47 | 36 | 34 | 38 |
| Opportunity to be helpful to others | 52 | 51 | 40 | 60 | 54 | 47 | 65 | 51 | 42 | 63 |
| Job freedom, independence | 38 | 36 | 38 | 33 | 46 | 48 | 44 | 33 | 36 | 29 |
| Availability of job openings | 26 | 25 | 25 | 26 | 29 | 28 | 31 | 23 | 23 | 23 |
| Possibility for rapid advancement | 33 | 31 | 35 | 27 | 38 | 43 | 31 | 33 | 34 | 31 |
| Work with people | 55 | 55 | 44 | 65 | 51 | 45 | 60 | 54 | 47 | 65 |
| 27. If you want to become a scientist but feel that you cannot, indicate the main reason for your decision. (Mark only ONE.) | | | | | | | | | |
| I can't afford it. | 6 | 6 | 7 | 4 | 6 | 7 | 5 | 7 | 11 | 3 |
| My parents are against it. | 1 | 2 | 2 | 1 | 1 | 2 | 0 | 4 | 6 | 1 |
| Because I haven't taken courses required for admission. | 10 | 10 | 11 | 10 | 9 | 9 | 9 | 17 | 19 | 15 |
| Because my grades are not good enough | 12 | 12 | 13 | 11 | 11 | 10 | 12 | 12 | 14 | 10 |
| Preparation takes too long. | 5 | 5 | 6 | 4 | 6 | 6 | 6 | 9 | 8 | 9 |
| Required courses are too hard. | 7 | 6 | 6 | 7 | 5 | 5 | 5 | 9 | 10 | 7 |
| I want to get married. | 4 | 4 | 3 | 5 | 2 | 2 | 3 | 4 | 5 | 3 |
| I want to go into military service. | 3 | 3 | 5 | 2 | 1 | 2 | 1 | 5 | 6 | 5 |
| I want to get into some other kind of career. | 40 | 39 | 37 | 41 | 33 | 35 | 30 | 39 | 40 | 39 |
| I want to become a scientist. | 5 | 4 | 6 | 3 | 15 | 16 | 13 | 6 | 8 | 4 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 77 | 79 | 71 | 71 | 73 | 70 | 63 | 62 | 64 | 73 | 74 | 68 | 70 | 72 | 70 | 69 | 65 | 65 | 65 |
| 54 | 59 | 38 | 50 | 53 | 49 | 46 | 50 | 43 | 55 | 58 | 44 | 50 | 54 | 49 | 44 | 46 | 52 | 42 |
| 71 | 69 | 77 | 67 | 64 | 69 | 62 | 59 | 64 | 67 | 65 | 75 | 65 | 63 | 63 | 68 | 66 | 63 | 68 |
| 71 | 70 | 77 | 68 | 65 | 70 | 68 | 60 | 73 | 65 | 64 | 71 | 66 | 64 | 62 | 71 | 69 | 60 | 75 |
| 64 | 60 | 78 | 68 | 64 | 70 | 68 | 64 | 71 | 62 | 61 | 69 | 66 | 63 | 66 | 68 | 73 | 68 | 77 |
| 46 | 47 | 44 | 43 | 46 | 42 | 46 | 47 | 45 | 42 | 42 | 41 | 45 | 47 | 35 | 51 | 46 | 45 | 47 |
| 53 | 51 | 60 | 34 | 33 | 34 | 45 | 42 | 47 | 46 | 45 | 52 | 35 | 34 | 27 | 45 | 51 | 47 | 54 |
| 50 | 46 | 64 | 68 | 57 | 74 | 64 | 57 | 69 | 45 | 42 | 53 | 64 | 55 | 74 | 68 | 63 | 58 | 67 |
| 47 | 50 | 39 | 36 | 44 | 32 | 46 | 48 | 45 | 48 | 48 | 47 | 39 | 47 | 21 | 45 | 50 | 50 | 49 |
| 32 | 31 | 35 | 32 | 30 | 33 | 26 | 24 | 28 | 29 | 28 | 32 | 30 | 30 | 30 | 32 | 27 | 26 | 28 |
| 46 | 49 | 34 | 31 | 36 | 29 | 32 | 37 | 29 | 43 | 45 | 34 | 32 | 37 | 25 | 30 | 33 | 38 | 30 |
| 45 | 42 | 56 | 64 | 52 | 70 | 64 | 59 | 68 | 44 | 41 | 54 | 59 | 48 | 80 | 57 | 66 | 60 | 70 |
| 6 | 7 | 5 | 6 | 6 | 6 | 4 | 4 | 4 | 6 | 7 | 3 | 6 | 7 | 5 | 7 | 4 | 3 | 4 |
| 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 0 |
| 9 | 9 | 8 | 6 | 5 | 6 | 6 | 5 | 7 | 10 | 10 | 10 | 8 | 8 | 9 | 7 | 6 | 6 | 6 |
| 8 | 7 | 10 | 11 | 12 | 11 | 8 | 9 | 7 | 10 | 9 | 12 | 12 | 12 | 13 | 12 | 6 | 7 | 6 |
| 4 | 4 | 3 | 6 | 6 | 6 | 6 | 7 | 5 | 3 | 3 | 4 | 7 | 8 | 5 | 7 | 6 | 8 | 5 |
| 4 | 4 | 5 | 5 | 5 | 5 | 7 | 8 | 7 | 5 | 6 | 5 | 6 | 5 | 6 | 5 | 7 | 8 | 7 |
| 2 | 1 | 5 | 2 | 1 | 2 | 3 | 2 | 4 | 2 | 2 | 4 | 2 | 1 | 4 | 2 | 2 | 1 | 2 |
| 3 | 4 | 0 | 2 | 3 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 1 | 3 | 1 | 1 | 1 | 1 |
| 38 | 38 | 38 | 35 | 29 | 37 | 43 | 40 | 45 | 36 | 37 | 33 | 34 | 33 | 43 | 28 | 46 | 40 | 50 |
| 13 | 14 | 9 | 13 | 20 | 9 | 3 | 3 | 2 | 13 | 14 | 9 | 12 | 15 | 2 | 16 | 3 | 4 | 2 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| Items 28 to 32 are concerned with major world issues. Give your opinion on the topics. | | | | | | | | | | |
| 28. **Money should not be given** for scientific research unless it has practical value. | | | | | | | | | | |
| Agree; probably agree | 69 | 67 | 63 | 70 | 62 | 60 | 65 | 64 | 61 | 67 |
| Disagree; probably disagree | 28 | 27 | 29 | 25 | 35 | 37 | 34 | 31 | 34 | 28 |
| 29. The by-products of past scientific efforts have been, on the whole, beneficial to man. | | | | | | | | | | |
| Agree; probably agree | 75 | 71 | 69 | 73 | 81 | 82 | 79 | 65 | 62 | 69 |
| Disagree; probably disagree | 18 | 19 | 19 | 19 | 14 | 13 | 17 | 26 | 27 | 24 |
| 30. Overall, would you say that science and technology do more good than harm? | | | | | | | | | | |
| Agree; probably agree | 71 | 68 | 67 | 70 | 76 | 76 | 77 | 65 | 66 | 64 |
| Disagree; probably disagree | 22 | 22 | 22 | 22 | 18 | 18 | 18 | 26 | 23 | 29 |
| 31. Some people would stop all high altitude flying to prevent possible break in the ozone layer. How do you feel about this? | | | | | | | | | | |
| Agree; probably agree | 41 | 38 | 38 | 38 | 39 | 39 | 39 | 47 | 46 | 48 |
| Disagree; probably disagree | 48 | 47 | 48 | 46 | 52 | 54 | 49 | 42 | 43 | 41 |
| 32. Assume that as a taxpayer, you are asked to pay to support these programs. Which ones would you willingly pay more taxes to support? (Mark any that apply.) | | | | | | | | | | |
| Conduct cancer research | 72 | 69 | 60 | 78 | 73 | 69 | 80 | 65 | 56 | 78 |
| Support science education programs | 22 | 21 | 22 | 20 | 34 | 34 | 34 | 27 | 26 | 27 |
| Improve the environment | 66 | 63 | 60 | 65 | 71 | 68 | 76 | 59 | 59 | 60 |
| Seek alternate sources for energy | 51 | 47 | 50 | 44 | 61 | 63 | 58 | 45 | 47 | 42 |
| Continue space research | 18 | 16 | 21 | 11 | 27 | 32 | 19 | 19 | 21 | 17 |
| Improve techniques for food production | 54 | 51 | 51 | 52 | 58 | 58 | 58 | 57 | 55 | 59 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Nurse | Non-Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 63 | 64 | 58 | 67 | 61 | 70 | 67 | 62 | 70 | 61 | 62 | 57 | 66 | 61 | 72 | 67 | 64 | 60 | 67 |
| 34 | 32 | 39 | 31 | 36 | 29 | 31 | 35 | 28 | 35 | 34 | 39 | 31 | 36 | 25 | 31 | 34 | 38 | 31 |
| 82 | 82 | 81 | 82 | 83 | 81 | 79 | 78 | 79 | 81 | 83 | 76 | 78 | 80 | 74 | 79 | 82 | 83 | 81 |
| 12 | 11 | 15 | 13 | 11 | 14 | 16 | 17 | 15 | 14 | 13 | 19 | 17 | 15 | 19 | 18 | 13 | 11 | 15 |
| 77 | 77 | 76 | 77 | 78 | 77 | 72 | 69 | 74 | 76 | 76 | 77 | 74 | 72 | 72 | 77 | 72 | 70 | 73 |
| 17 | 17 | 19 | 17 | 16 | 18 | 22 | 26 | 19 | 19 | 19 | 19 | 20 | 21 | 20 | 19 | 22 | 23 | 21 |
| 36 | 36 | 33 | 41 | 44 | 40 | 41 | 40 | 42 | 40 | 40 | 39 | 40 | 42 | 35 | 40 | 41 | 40 | 42 |
| 55 | 55 | 54 | 48 | 48 | 48 | 49 | 54 | 44 | 52 | 53 | 48 | 48 | 49 | 47 | 49 | 48 | 54 | 44 |
| 69 | 66 | 80 | 79 | 70 | 84 | 79 | 70 | 84 | 72 | 70 | 79 | 75 | 65 | 85 | 80 | 79 | 71 | 84 |
| 36 | 35 | 40 | 34 | 36 | 33 | 25 | 27 | 24 | 35 | 33 | 42 | 30 | 33 | 21 | 33 | 28 | 29 | 27 |
| 70 | 67 | 81 | 71 | 70 | 71 | 75 | 71 | 78 | 69 | 66 | 76 | 71 | 73 | 63 | 76 | 77 | 75 | 78 |
| 67 | 67 | 65 | 57 | 64 | 53 | 62 | 65 | 60 | 64 | 64 | 64 | 55 | 63 | 45 | 55 | 65 | 67 | 63 |
| 31 | 33 | 26 | 19 | 29 | 14 | 19 | 28 | 13 | 32 | 34 | 23 | 20 | 28 | 12 | 17 | 22 | 29 | 16 |
| 55 | 55 | 56 | 59 | 61 | 58 | 60 | 62 | 58 | 56 | 56 | 54 | 58 | 58 | 57 | 59 | 61 | 64 | 59 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 33. How do you feel about careers in science fields for females? | | | | | | | | | | |
| Approve; probably approve | 89 | 85 | 80 | 90 | 90 | 88 | 95 | 88 | 83 | 94 |
| Disapprove; probably disapprove | 8 | 9 | 12 | 6 | 7 | 9 | 4 | 9 | 13 | 4 |
| 34. Have you ever considered a career for yourself in science, mathematics, or engineering? | | | | | | | | | | |
| Yes | 49 | 45 | 53 | 38 | 77 | 81 | 72 | 100 | 100 | 100 |
| No | 45 | 46 | 36 | 55 | 17 | 13 | 24 | 3 | 4 | 1 |
| 35. Has anyone ever encouraged you to consider a career in science, mathematics, or engineering? | | | | | | | | | | |
| Yes | 44 | 39 | 45 | 33 | 61 | 65 | 56 | 60 | 58 | 62 |
| No | 42 | 42 | 34 | 50 | 24 | 21 | 29 | 24 | 23 | 24 |
| 36. In your spare time reading, have you read one or more magazines or books in any of these groups during the past year? (Mark any that apply.) | | | | | | | | | | |
| Popular Mechanics, Mechanics Illustrated | 31 | 29 | 49 | 11 | 40 | 58 | 14 | 33 | 49 | 12 |
| Popular Science, Psychology Today | 27 | 24 | 30 | 19 | 42 | 46 | 36 | 31 | 35 | 26 |
| Science fiction (not comic books) | 35 | 33 | 33 | 33 | 46 | 45 | 47 | 37 | 36 | 37 |
| Other kinds of fiction | 51 | 48 | 38 | 57 | 57 | 50 | 66 | 42 | 34 | 52 |
| Health, physical fitness, diet, Yoga, etc. | 37 | 36 | 22 | 49 | 38 | 29 | 52 | 42 | 36 | 51 |
| Social-political, cultural problems | 30 | 29 | 25 | 32 | 38 | 34 | 42 | 36 | 34 | 38 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 90 | 88 | 98 | 93 | 88 | 96 | 93 | 88 | 96 | 90 | 88 | 94 | 92 | 88 | 92 | 97 | 92 | 87 | 95 |
| 6 | 7 | 2 | 4 | 7 | 2 | 4 | 10 | 1 | 7 | 8 | 5 | 6 | 9 | 5 | 2 | 6 | 11 | 3 |
| 89 | 89 | 88 | 75 | 82 | 71 | 53 | 58 | 49 | 84 | 83 | 91 | 70 | 76 | 56 | 74 | 53 | 61 | 48 |
| 7 | 6 | 10 | 21 | 12 | 25 | 43 | 36 | 47 | 10 | 11 | 8 | 26 | 20 | 41 | 22 | 43 | 35 | 49 |
| 73 | 71 | 78 | 61 | 66 | 58 | 47 | 51 | 44 | 67 | 66 | 74 | 55 | 58 | 45 | 60 | 49 | 56 | 44 |
| 16 | 16 | 16 | 24 | 17 | 28 | 39 | 31 | 44 | 19 | 20 | 17 | 30 | 27 | 40 | 26 | 37 | 30 | 43 |
| 51 | 62 | 16 | 22 | 45 | 11 | 22 | 42 | 8 | 53 | 62 | 21 | 26 | 48 | 8 | 13 | 19 | 32 | 9 |
| 42 | 45 | 33 | 32 | 38 | 29 | 39 | 44 | 35 | 41 | 43 | 31 | 31 | 39 | 21 | 31 | 41 | 44 | 39 |
| 43 | 45 | 39 | 41 | 41 | 41 | 40 | 43 | 38 | 44 | 45 | 42 | 42 | 42 | 40 | 44 | 42 | 45 | 40 |
| 52 | 47 | 68 | 58 | 54 | 61 | 62 | 52 | 69 | 52 | 49 | 65 | 58 | 53 | 56 | 66 | 65 | 56 | 72 |
| 33 | 26 | 53 | 50 | 33 | 59 | 42 | 27 | 53 | 29 | 26 | 42 | 44 | 30 | 56 | 51 | 41 | 26 | 52 |
| 32 | 29 | 42 | 38 | 38 | 38 | 51 | 48 | 54 | 33 | 30 | 45 | 34 | 33 | 32 | 38 | 59 | 59 | 58 |

| | | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 37. Examine the statements below, and then indicate any which most of your high school teachers do. (Mark as many as apply.) | | | | | | | | | | |
| Encourage students to be creative, original | 54 | 53 | 49 | 57 | 57 | 58 | 56 | 56 | 48 | 67 |
| Tell students which jobs offer the best opportunities for males and for females | 25 | 27 | 25 | 28 | 22 | 22 | 21 | 39 | 37 | 41 |
| Offer frequent opportunity to talk with teachers individually | 32 | 31 | 31 | 31 | 38 | 40 | 35 | 36 | 32 | 41 |
| Encourage students to consider education and/or training beyond high school | 59 | 56 | 53 | 60 | 59 | 58 | 60 | 59 | 53 | 66 |
| Tell students science course work is difficult | 9 | 10 | 12 | 7 | 12 | 13 | 11 | 13 | 15 | 10 |
| Give students advice on what to do after high school | 33 | 33 | 32 | 34 | 34 | 37 | 30 | 44 | 43 | 46 |
| Encourage students to take mathematics courses | 20 | 19 | 22 | 17 | 28 | 31 | 24 | 29 | 28 | 31 |
| Encourage students to explore many choices for post-high school plans | 32 | 31 | 29 | 32 | 32 | 33 | 32 | 33 | 29 | 27 |
| Tell students in which courses males and females can expect to be most successful | 16 | 17 | 16 | 17 | 14 | 15 | 13 | 24 | 22 | 27 |
| Encourage students to build basic skills | 46 | 45 | 40 | 49 | 51 | 51 | 52 | 43 | 36 | 52 |
| Treat students as if they were children | 23 | 21 | 21 | 21 | 23 | 22 | 23 | 17 | 18 | 15 |
| Seldom take students' opinions seriously | 30 | 28 | 28 | 29 | 29 | 28 | 29 | 24 | 26 | 22 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 57 | 55 | 64 | 59 | 59 | 59 | 54 | 48 | 59 | 58 | 57 | 61 | 56 | 56 | 57 | 57 | 55 | 54 | 56 |
| 25 | 25 | 25 | 25 | 21 | 27 | 22 | 21 | 22 | 23 | 24 | 23 | 25 | 23 | 32 | 23 | 19 | 18 | 19 |
| 39 | 37 | 44 | 38 | 45 | 35 | 38 | 41 | 35 | 36 | 37 | 31 | 38 | 42 | 32 | 38 | 39 | 43 | 36 |
| 59 | 57 | 64 | 65 | 63 | 66 | 60 | 56 | 62 | 58 | 57 | 63 | 64 | 62 | 66 | 66 | 58 | 57 | 58 |
| 12 | 13 | 8 | 15 | 19 | 13 | 10 | 11 | 9 | 13 | 13 | 12 | 13 | 15 | 8 | 13 | 10 | 11 | 9 |
| 37 | 37 | 35 | 35 | 35 | 34 | 31 | 31 | 31 | 37 | 38 | 31 | 36 | 37 | 39 | 32 | 29 | 31 | 27 |
| 34 | 35 | 27 | 25 | 25 | 25 | 22 | 19 | 25 | 31 | 33 | 25 | 24 | 25 | 20 | 26 | 22 | 24 | 21 |
| 35 | 35 | 38 | 37 | 38 | 36 | 35 | 33 | 36 | 33 | 32 | 37 | 36 | 38 | 37 | 34 | 36 | 37 | 35 |
| 18 | 18 | 19 | 16 | 15 | 16 | 14 | 15 | 14 | 16 | 15 | 21 | 17 | 17 | 20 | 15 | 10 | 11 | 8 |
| 51 | 48 | 60 | 52 | 51 | 52 | 52 | 47 | 56 | 53 | 51 | 59 | 51 | 50 | 52 | 52 | 52 | 51 | 54 |
| 19 | 19 | 19 | 19 | 17 | 21 | 23 | 23 | 23 | 22 | 23 | 19 | 21 | 21 | 20 | 24 | 24 | 24 | 24 |
| 28 | 27 | 28 | 27 | 25 | 28 | 30 | 32 | 28 | 26 | 27 | 24 | 29 | 28 | 26 | 31 | 31 | 34 | 29 |

| | Total National Sample | All Respondents | | | Science Career Choices | | | Non-white Science Leaning | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | M | F | Total | M | F | Total | M | F |
| 38. Do you agree with any of these statements? (Mark as many as apply.) | | | | | | | | | | |
| A woman's place is in the home. | 18 | 18 | 24 | 12 | 16 | 22 | 6 | 17 | 23 | 9 |
| Women are as interested in mathematics as are men. | 63 | 61 | 52 | 68 | 67 | 60 | 78 | 63 | 53 | 78 |
| Men don't like to work for women supervisors. | 51 | 49 | 47 | 50 | 53 | 55 | 50 | 43 | 39 | 50 |
| Women should stick to "women's jobs." | 19 | 18 | 25 | 11 | 16 | 22 | 6 | 16 | 24 | 6 |
| Women have as much science ability as men do. | 70 | 67 | 58 | 75 | 76 | 70 | 85 | 67 | 57 | 82 |
| Education is wasted on women since they usually get married and raise a family. | 9 | 9 | 13 | 5 | 7 | 10 | 2 | 13 | 18 | 6 |
| Women have the ability and endurance to make successful space flights. | 43 | 40 | 30 | 50 | 48 | 39 | 61 | 44 | 34 | 59 |
| Working women take jobs away from men. | 18 | 18 | 25 | 12 | 21 | 25 | 15 | 20 | 25 | 14 |
| According to the latest Census data, equal job opportunities have now been achieved. | 23 | 24 | 21 | 27 | 19 | 19 | 18 | 31 | 27 | 35 |
| I strongly approve the election of women as governors. | 40 | 39 | 25 | 52 | 44 | 30 | 65 | 41 | 28 | 59 |
| I approve of appointing a woman as chairman of the Atomic Energy Commission. | 34 | 33 | 23 | 42 | 40 | 31 | 54 | 37 | 26 | 53 |
| I would choose for myself the best qualified dentist available regardless of sex. | 75 | 71 | 66 | 77 | 80 | 78 | 82 | 74 | 68 | 82 |

| Job Family Preferences | | | | | | | | | Occupational Choices | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physical Science | | | Life Science | | | Humanities | | | Physical Science | | | Life Science | | | | Humanities | | |
| | | | | | | | | | | | | | | Non-Nurse | Nurse | | | |
| Total | M | F | Total | M | F | Total | M | F | Total | M | F | Total | M | F | F | Total | M | F |
| 16 | 18 | 9 | 11 | 19 | 7 | 12 | 17 | 9 | 19 | 22 | 9 | 13 | 21 | 11 | 6 | 10 | 16 | 6 |
| 67 | 62 | 81 | 70 | 59 | 76 | 70 | 59 | 77 | 65 | 61 | 80 | 70 | 62 | 70 | 79 | 70 | 61 | 77 |
| 54 | 54 | 53 | 51 | 51 | 50 | 54 | 53 | 56 | 54 | 53 | 56 | 51 | 52 | 52 | 50 | 58 | 61 | 55 |
| 17 | 19 | 10 | 11 | 22 | 6 | 11 | 17 | 7 | 17 | 20 | 5 | 15 | 23 | 13 | 6 | 10 | 18 | 5 |
| 71 | 68 | 81 | 80 | 71 | 85 | 80 | 69 | 87 | 70 | 67 | 81 | 79 | 71 | 78 | 89 | 84 | 76 | 89 |
| 8 | 9 | 3 | 6 | 12 | 3 | 7 | 10 | 4 | 8 | 9 | 2 | 7 | 11 | 4 | 3 | 6 | 10 | 4 |
| 46 | 39 | 68 | 52 | 38 | 59 | 54 | 40 | 63 | 42 | 37 | 62 | 50 | 40 | 48 | 64 | 58 | 44 | 67 |
| 21 | 23 | 15 | 17 | 26 | 13 | 19 | 28 | 12 | 22 | 23 | 18 | 18 | 26 | 14 | 13 | 16 | 27 | 9 |
| 19 | 20 | 15 | 22 | 18 | 24 | 19 | 17 | 21 | 18 | 19 | 13 | 22 | 19 | 30 | 18 | 19 | 17 | 20 |
| 41 | 31 | 73 | 50 | 28 | 62 | 54 | 36 | 67 | 39 | 30 | 75 | 45 | 28 | 50 | 62 | 59 | 39 | 73 |
| 38 | 30 | 62 | 41 | 26 | 49 | 50 | 39 | 58 | 39 | 32 | 64 | 39 | 26 | 39 | 55 | 54 | 40 | 64 |
| 79 | 78 | 83 | 81 | 77 | 83 | 84 | 80 | 87 | 78 | 77 | 84 | 81 | 79 | 79 | 85 | 86 | 85 | 87 |

# APPENDIX C

TABLE C1

PERCENTAGE OF MEN AND WOMEN AND WHITE AND NON-WHITE BY SEX
WHO EXPECT VARIOUS OCCUPATIONS AND THE NUMBER AND PERCENTAGE
OF THE TOTAL GROUP SURVEYED WHO CHECKED AT LEAST SOME FUTURE OCCUPATION

| Expected Future Occuation | Sex[1] | | White | | Non-White | | Total | [2] |
|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | (n) | (%) |
| All respondents occupation | 47 | 53 | 42 | 48 | 5 | 5 | 6584 | 100 |
| Engineering, Physical Science, Mathematics, and Architecture | 79 | 21 | 72 | 19 | 6 | 3 | 494 | 7.5 |
| Architect | 80 | 20 | 74 | 17 | 7 | 3 | 122 | 1.9 |
| Chemist | 85 | 15 | 75 | 17 | 8 | 0 | 13 | .2 |
| Engineer | 86 | 14 | 80 | 13 | 6 | 2 | 260 | 3.9 |
| n.e.c. | 83 | 18 | 69 | 19 | 12 | 0 | 45 | .7 |
| aero | 65 | 35 | 65 | 29 | 0 | 6 | 17 | .3 |
| chemical | 81 | 19 | 74 | 19 | 7 | 0 | 27 | .4 |
| civil | 79 | 21 | 80 | 15 | 0 | 5 | 39 | .6 |
| electrical | 95 | 5 | 87 | 5 | 8 | 0 | 63 | 1.0 |
| mechanical | 90 | 10 | 87 | 9 | 3 | 1 | 69 | 1.0 |
| Geologist | 77 | 23 | 69 | 23 | 8 | 0 | 13 | .2 |
| Mathematician, | 44 | 56 | 39 | 52 | 4 | 5 | 57 | .9 |
| Statistician | 47 | 53 | 41 | 44 | 6 | 9 | 34 | .5 |
| College math teacher | 40 | 60 | 40 | 60 | 0 | 0 | 5 | .1 |
| H.S. math teacher | 39 | 61 | 35 | 65 | 0 | 0 | 18 | .3 |
| Physical Scientist | 88 | 12 | 76 | 12 | 12 | 0 | 17 | .3 |
| Physicist | 75 | 25 | 43 | 14 | 29 | 14 | 8 | .1 |
| Science teachers | | | | | | | | |
| College | 100 | 0 | 100 | 0 | 0 | 0 | 1 | .0 |
| H.S. | 67 | 33 | 33 | 33 | 33 | 0 | 3 | .0 |
| Medical and Biological Science | 40 | 60 | 37 | 54 | 4 | 5 | 1100 | 17 |
| Agr. Specialist | 71 | 29 | 69 | 26 | 3 | 3 | 35 | .5 |
| Biologist, Zoologist | 43 | 57 | 41 | 55 | 2 | 2 | 98 | 1.5 |
| Dentist | 51 | 49 | 42 | 43 | 9 | 2 | 55 | .8 |
| Nurse | 4 | 96 | 6 | 84 | 1 | 9 | 319 | 4.8 |
| Pharmacist | 57 | 43 | 49 | 33 | 8 | 10 | 49 | .7 |
| Physician | 61 | 39 | 57 | 33 | 5 | 5 | 174 | 2.6 |
| Veterinarian | 31 | 69 | 29 | 67 | 2 | 2 | 128 | 1.9 |
| Wildlife/Conservation | 66 | 34 | 60 | 31 | 6 | 3 | 241 | 3.7 |

[1]Percentage based on the number (n) selecting each occupation.

[2]Percentage based on the total number (n) selecting at least one of the occupations (n = 6584).

TABLE C1

(Continued)

| | Sex | | White | | Non-White | | Total | |
|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | (n) | (%) |
| All respondents occupation | 47 | 53 | 42 | 48 | 5 | 5 | 6584 | 100 |
| Business Administration | 62 | 38 | 55 | 34 | 7 | 3 | 518 | 8 |
| Accountant, Auditor, Comptroller | 44 | 56 | 40 | 54 | 3 | 3 | 120 | 1.8 |
| Advertising | 29 | 71 | 29 | 64 | 0 | 7 | 14 | .2 |
| Bus. Adm. & Mgt. | 71 | 29 | 62 | 25 | 9 | 5 | 131 | 2.0 |
| C.P.A. | 65 | 35 | 60 | 36 | 4 | 0 | 26 | .4 |
| Efficiency expert, Ind. Engr., Prod. Mgr. | 71 | 29 | 57 | 29 | 14 | 0 | 7 | .1 |
| Finance Worker | 60 | 40 | 60 | 40 | 0 | 0 | 5 | .1 |
| Industry, Bus., Commerce | 90 | 10 | 90 | 10 | 0 | 0 | 10 | .2 |
| Investment consultant | 100 | 0 | 50 | 0 | 50 | 0 | 4 | .1 |
| Mfg. Mgt. | 60 | 40 | 60 | 40 | 0 | 0 | 5 | .1 |
| Marketing | 63 | 37 | 56 | 37 | 7 | 0 | 27 | .4 |
| Military Officer | 74 | 26 | 60 | 19 | 16 | 6 | 70 | 1.1 |
| Personnel Administration | 67 | 33 | 70 | 15 | 9 | 6 | 12 | .2 |
| Pilot | 79 | 21 | 70 | 15 | 9 | 6 | 53 | .8 |
| Purchasing Agent | 17 | 83 | 17 | 83 | 0 | 0 | 6 | .1 |
| Retail Buyer | 23 | 77 | 23 | 77 | 0 | 0 | 13 | .2 |
| Stockbroker | 73 | 27 | 82 | 18 | 0 | 0 | 11 | .2 |
| Teacher-Commercial | 25 | 75 | 25 | 75 | 0 | 0 | 4 | .1 |
| General Teaching and Social Service | 20 | 80 | 18 | 72 | 3 | 7 | 760 | 11.5 |
| Clergy | 74 | 26 | 70 | 26 | 4 | 0 | 23 | .3 |
| Guidance-Counseling | 29 | 71 | 21 | 65 | 6 | 9 | 35 | .5 |
| Guidance - Voc. & Ed. | 60 | 40 | 60 | 40 | 0 | 0 | 5 | .1 |
| Social Worker | 10 | 90 | 11 | 73 | 2 | 14 | 179 | 2.7 |
| Teacher | 20 | 80 | 18 | 75 | 3 | 5 | 518 | 7.9 |
| n.e.c. | 7 | 93 | 4 | 82 | 4 | 11 | 28 | .4 |
| elementary | 6 | 94 | 7 | 91 | 0 | 2 | 126 | 1.9 |
| high school | 29 | 71 | 23 | 65 | 6 | 6 | 52 | .8 |
| preschool | 4 | 96 | 4 | 84 | 0 | 12 | 51 | .8 |
| handicapped | 6 | 94 | 9 | 88 | 0 | 3 | 95 | 1.4 |
| home ec. | 9 | 91 | 9 | 89 | 0 | 3 | 35 | .5 |
| phys. ed. | 50 | 50 | 43 | 45 | 7 | 5 | 131 | 2.0 |

TABLE C1

(Continued)

| | Sex | | White | | Non-White | | Total | |
|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | (n) | (%) |
| All respondents occupation | 47 | 53 | 42 | 48 | 5 | 5 | 6584 | 100 |
| Humanities, Law, Social & Behavioral Sciences | 44 | 56 | 39 | 51 | 4 | 5 | 464 | 7.0 |
| Diplomat | 45 | 55 | 50 | 45 | 0 | 5 | 22 | .3 |
| Economist | 50 | 50 | 40 | 40 | 10 | 10 | 10 | .2 |
| Journalist, Reporter | 42 | 58 | 40 | 56 | 0 | 5 | 65 | 1.0 |
| Lawyer | 56 | 44 | 49 | 39 | 7 | 6 | 167 | 2.5 |
| Librarian | 0 | 100 | 0 | 88 | 0 | 12 | 8 | .1 |
| Psychologist | 34 | 66 | 29 | 60 | 5 | 6 | 102 | 1.5 |
| Social Scientist | 48 | 52 | 48 | 48 | 0 | 5 | 21 | .3 |
| Teacher | 39 | 61 | 36 | 56 | 3 | 6 | 36 | .5 |
| college (n.e.c.) | 25 | 75 | 25 | 50 | 0 | 25 | 4 | .1 |
| English | | | | | | | | |
| college | 67 | 33 | 67 | 33 | 0 | 0 | 3 | .0 |
| high school | 14 | 86 | 14 | 86 | 0 | 0 | 7 | .1 |
| Foreign Language | | | | | | | | |
| college | 25 | 75 | 25 | 75 | 0 | 0 | 4 | .1 |
| high school | 42 | 58 | 33 | 50 | 8 | 8 | 12 | .2 |
| Social Sciences | | | | | | | | |
| college | 100 | 0 | 100 | 0 | 0 | 0 | 2 | .0 |
| high school | 50 | 50 | 50 | 50 | 0 | 0 | 4 | .1 |
| Writer | 24 | 76 | 24 | 73 | 3 | 0 | 33 | .5 |
| Fine Arts, Performing Arts | 31 | 69 | 27 | 64 | 4 | 5 | 450 | 6.8 |
| Artist, Painter, Sculptor | 28 | 72 | 24 | 59 | 4 | 13 | 71 | 1.1 |
| Commercial Artist | 8 | 92 | 7 | 88 | 1 | 3 | 121 | 1.8 |
| Musical/Instrum. | 51 | 49 | 44 | 45 | 8 | 2 | 86 | 1.3 |
| Teacher | | | | | | | | |
| Art | 35 | 65 | 28 | 60 | 7 | 5 | 58 | .9 |
| Music | 43 | 57 | 39 | 52 | 4 | 4 | 72 | 1.1 |
| Theater Worker | 31 | 69 | 31 | 60 | 2 | 7 | 42 | .6 |
| Technical Jobs | 51 | 49 | 43 | 44 | 7 | 6 | 408 | 6.2 |
| Computer | 56 | 44 | 48 | 30 | 9 | 13 | 23 | .3 |
| EAM Operator, Supv. | 57 | 43 | 48 | 30 | 9 | 13 | 23 | .3 |
| Programmer | 64 | 36 | 50 | 36 | 12 | 2 | 52 | .8 |
| Repair Service | 92 | 8 | 80 | 10 | 10 | 0 | 12 | .2 |
| Dental Hygienist | 11 | 89 | 11 | 77 | 0 | 13 | 47 | .7 |
| Drafting | 82 | 18 | 70 | 13 | 11 | 6 | 56 | .9 |

TABLE C1

(Continued)

| | Sex | | White | | Non-White | | Total | |
|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | (n) | (%) |
| All respondents occupation | 47 | 53 | 42 | 48 | 5 | 5 | 6584 | 100 |
| Technical Jobs (continued) | 51 | 49 | 43 | 44 | 7 | 6 | 408 | 6.2 |
| Electronics | 67 | 33 | 61 | 28 | 7 | 4 | 80 | 1.2 |
| technician | 86 | 14 | 73 | 11 | 14 | 2 | 44 | .7 |
| worker | 44 | 56 | 47 | 47 | 0 | 6 | 36 | .5 |
| Lab Technician | 25 | 75 | 25 | 75 | 0 | 0 | 20 | .3 |
| biol., dent., med. | 19 | 81 | 19 | 81 | 0 | 0 | 16 | .2 |
| phys. sci., eng., etc. | 50 | 50 | 50 | 50 | 0 | 0 | 4 | .1 |
| photographer | 45 | 55 | 39 | 50 | 4 | 7 | 47 | .7 |
| physical therapist | 20 | 80 | 13 | 70 | 10 | 7 | 30 | .5 |
| spec. therapist | 12 | 88 | 13 | 88 | 0 | 0 | 8 | .1 |
| surveyor | 100 | 0 | 80 | 0 | 20 | 0 | 5 | .1 |
| technologist/med.,dent. | 21 | 79 | 21 | 68 | 0 | 11 | 28 | .4 |
| Proprietors, Sales | 69 | 31 | 61 | 30 | 7 | 3 | 246 | 3.7 |
| Clerk/Sales | 17 | 83 | 17 | 74 | 0 | 9 | 54 | .8 |
| Farming/ranching-owner | 92 | 8 | 82 | 8 | 9 | 0 | 99 | 1.5 |
| Manager/sales | 62 | 38 | 50 | 36 | 11 | 4 | 29 | .4 |
| Proprietor, Contractor | 81 | 19 | 81 | 19 | 0 | 0 | 21 | .3 |
| Sales | 77 | 23 | 60 | 23 | 17 | 0 | 31 | .5 |
| Auto | 83 | 17 | 67 | 17 | 17 | 0 | 12 | .2 |
| Insurance | 100 | 0 | 60 | 0 | 40 | 0 | 5 | .1 |
| Other | 60 | 40 | 50 | 40 | 10 | 0 | 10 | .2 |
| Real Estate | 75 | 25 | 67 | 33 | 0 | 0 | 4 | .1 |
| Supervisor, Business | 83 | 17 | 83 | 17 | 0 | 0 | 12 | .2 |
| Mechanics, Ind. Trades | 81 | 19 | 72 | 15 | 9 | 4 | 507 | 7.7 |
| Clothing, Fashion | 4 | 96 | 4 | 75 | 1 | 20 | 79 | 1.2 |
| Electrician | 93 | 7 | 80 | 4 | 13 | 2 | 45 | .7 |
| Machinist/Mechanic | 96 | 04 | 82 | 3 | 14 | 1 | 97 | 1.5 |
| Airplane | 96 | 4 | 84 | 4 | 12 | 0 | 25 | .4 |
| Auto | 99 | 1 | 89 | 1 | 10 | 0 | 167 | 2.5 |
| Other (n.e.c.) | 93 | 7 | 93 | 7 | 0 | 0 | 41 | .6 |
| Metal Worker | 88 | 12 | 80 | 8 | 8 | 4 | 25 | .4 |
| Printing Trades | 67 | 33 | 44 | 33 | 22 | 0 | 9 | .1 |
| Repair | 84 | 16 | 84 | 11 | 0 | 5 | 19 | .3 |
| Appliance | 100 | 0 | 100 | 0 | 0 | 0 | 8 | .1 |
| Industrial Machine | 100 | 0 | 100 | 0 | 0 | 0 | 2 | .0 |
| Office Machine | No data | | | | | | | |
| Telephone (including Installation) | 67 | 33 | 67 | 22 | 0 | 11 | 9 | .1 |

TABLE C1

(Continued)

| | Sex | | White | | Non-White | | Total | |
|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | (n) | (%) |
| All respondents occupation | 47 | 53 | 42 | 48 | 5 | 5 | 6584 | 100 |
| Construction Trades | 98 | 2 | 84 | 2 | 14 | 0 | 250 | 3.8 |
| Bricklayer, mason, painter, roofer, plasterer, etc. | 100 | 0 | 85 | 0 | 15 | 0 | 33 | .5 |
| Building construction/ misc. | 96 | 4 | 84 | 5 | 11 | 0 | 48 | .7 |
| Carpenter | 100 | 0 | 86 | 0 | 14 | 0 | 74 | 1.1 |
| Foreperson (n.e.c.) | 100 | 0 | 100 | 0 | 0 | 0 | 3 | .0 |
| Heavy Equip. Op. | 99 | 1 | 87 | 1 | 12 | 0 | 69 | 1.0 |
| Mining, quarrying, etc. | 75 | 25 | 75 | 25 | 0 | 0 | 4 | .1 |
| Plumber, pipefitter | 90 | 10 | 58 | 11 | 32 | 0 | 19 | .3 |
| Secretarial-Clerical Office Workers | 4 | 96 | 5 | 84 | 1 | 10 | 768 | 11.7 |
| Accounting recording worker, etc. | 17 | 83 | 22 | 72 | 0 | 6 | 18 | .3 |
| Bookkeeper | 6 | 94 | 6 | 81 | 0 | 14 | 72 | 1.1 |
| Clerical Worker/Misc. | 7 | 93 | 6 | 81 | 1 | 12 | 83 | 1.3 |
| Clerk | 8 | 92 | 8 | 85 | 0 | 8 | 39 | .6 |
| Bank | 8 | 92 | 8 | 84 | 0 | 8 | 24 | .4 |
| Misc. | 7 | 93 | 7 | 87 | 0 | 7 | 15 | .2 |
| Operator | 16 | 84 | 19 | 74 | 0 | 7 | 43 | .7 |
| Keypunch | 7 | 93 | 11 | 82 | 0 | 7 | 27 | .4 |
| Radio, telegraph, teletype | 50 | 50 | 50 | 33 | 0 | 17 | 6 | .1 |
| Telephone (PBX) | 20 | 80 | 20 | 80 | 0 | 0 | 10 | .2 |
| Secretary | 2 | 98 | 3 | 87 | 1 | 9 | 412 | 6.3 |
| n.e.c. | 2 | 98 | 4 | 86 | 1 | 10 | 283 | 4.3 |
| legal | 4 | 96 | 4 | 88 | 1 | 7 | 82 | 1.2 |
| medical | 0 | 100 | 0 | 92 | 0 | 8 | 47 | .7 |
| Stenographer, etc. | 0 | 100 | 0 | 91 | 0 | 9 | 33 | .5 |
| Typist | 0 | 100 | 0 | 82 | 0 | 18 | 68 | 1.0 |
| General Labor, Community and Public Service | 59 | 41 | 53 | 37 | 6 | 5 | 619 | 9.4 |
| Butcher, meat cutter | 95 | 5 | 67 | 0 | 28 | 6 | 19 | .3 |
| Driver: auto, bus, truck | 81 | 19 | 72 | 16 | 9 | 3 | 75 | 1.1 |
| Farming/ranching | 76 | 24 | 73 | 23 | 3 | 1 | 138 | 2.1 |
| Fire person | 86 | 14 | 79 | 14 | 7 | 0 | 14 | .2 |
| Hairdresser | 2 | 98 | 1 | 92 | 1 | 6 | 88 | 1.3 |
| Laborer/general | 46 | 54 | 41 | 47 | 3 | 9 | 35 | .5 |
| Military/enlisted | 56 | 44 | 52 | 34 | 4 | 10 | 73 | 1.1 |
| Nurse/practical | 2 | 98 | 3 | 80 | 0 | 17 | 40 | .6 |
| Police | 79 | 21 | 70 | 18 | 10 | 2 | 137 | 2.1 |

# APPENDIX D

TABLE D1

STANDARD SCORE MEANS FOR COLLEGE BOUND HIGH SCHOOL MALE AND FEMALE SENIORS EXPECTING TO HAVE SCIENCE CAREERS AND NON-SCIENCE CAREERS AND RAW SCORE MEANS AND STANDARD DEVIATION FOR COLLEGE AND NON-COLLEGE BOUND SENIORS

| ITEM NO. | VARIABLES | STANDARD SCORE GROUP MEAN[2] SCIENCE M | SCIENCE F | NON-SCIENCE M | NON-SCIENCE F | RAW SCORE TOTAL MEAN | TOTAL SD | F-VALUES[3] 4-GROUP | F-VALUES[3] 2-GROUP |
|---|---|---|---|---|---|---|---|---|---|
| 04 | High School Grades | 55 | 57 | 51 | 52 | 2.70 | .70 | 7.8*** | 11.8*** |
| 08 | Father Education Level | 55 | 55 | 53 | 51 | 2.68 | 1.60 | 6.2*** | 8.6** |
| 09 | Mother Education Level | 54 | 53 | 53 | 50 | 2.53 | 1.40 | 6.0*** | 3.1 |
| 10 | Expected Education Level | 59 | 58 | 56 | 53 | 4.22 | 1.37 | 24.4*** | 21.3*** |
| 16 | Planned Marriage Age | 53 | 53 | 53 | 49 | 2.99 | 1.07 | 10.3*** | 14.9*** |
| 18 | Women Marriage Vs. Career | 49 | 53 | 48 | 53 | 1.78 | .47 | 13.1*** | .6 |
| 19 | Counselor Education Talks | 52 | 54 | 52 | 52 | 2.48 | 1.00 | .8 | 1.9 |
| 20 | Counselor Occupation Talks | 49 | 52 | 50 | 51 | 1.99 | .90 | 1.4 | .1 |
| 33 | Approve Female Science Role | 50 | 52 | 47 | 52 | .94 | .23 | 8.2*** | .2 |
| 34 | Considered Science Career | 57 | 57 | 52 | 48 | .53 | .50 | 49.0*** | 61.7*** |
| 35 | Science Career Encouragement | 56 | 57 | 52 | 48 | .49 | .50 | 36.9*** | 61.0*** |
| 05 | No. New Science Courses | 54 | 52 | 51 | 49 | .85 | 1.08 | 8.2*** | 5.3* |
| 07A[1] | Mathematics-Science Honors | 56 | 55 | 51 | 49 | .39 | .79 | 16.4*** | 25.1*** |
| 07B | Language-Social Studies Honors | 50 | 55 | 52 | 51 | .32 | .64 | 5.0** | 12.2*** |
| 11A | Mathematical-Science Ability | 59 | 58 | 53 | 50 | .70 | 1.76 | 45.9*** | 50.7*** |
| 11B | Language-Art Ability | 51 | 52 | 52 | 53 | .26 | 1.22 | 1.1 | .3 |
| 11C | Physical-Mechanical Ability | 55 | 51 | 54 | 47 | .53 | 1.22 | 30.0*** | 11.0*** |
| 12AA | Mathematics Courses Taken | 57 | 56 | 54 | 51 | .59 | 1.93 | 21.7*** | 17.2*** |
| 12AB | Science Courses Taken | 58 | 57 | 54 | 50 | .19 | 1.79 | 36.2*** | 39.2*** |
| 12AC | Humanities Courses Taken | 50 | 51 | 51 | 51 | 1.57 | 1.43 | .3 | .1 |
| 12AD | Mechanical Courses Taken | 54 | 45 | 52 | 45 | -1.13 | 1.24 | 64.7*** | .1 |
| 12AE | Business-Home Ec Courses Taken | 43 | 50 | 45 | 53 | .42 | 1.82 | 68.1*** | 12.4*** |
| 12AB | Mathematics Courses Liked | 57 | 55 | 52 | 51 | .18 | 1.99 | 15.7*** | 12.9*** |
| 12BB | Science Courses Liked | 57 | 54 | 51 | 49 | .37 | 1.72 | 21.9*** | 14.3*** |
| 12BC | Humanities Courses Liked | 48 | 52 | 50 | 53 | 1.36 | 1.83 | 9.7*** | .9 |
| 12BD | Mechanical Courses Liked | 55 | 48 | 51 | 47 | .08 | 1.18 | 28.4*** | .9 |
| 12BE | Business-Home Ec Courses Liked | 47 | 49 | 46 | 53 | .86 | 1.64 | 29.6*** | 16.9*** |
| 13 | Mech Devices-Books at Home | 53 | 53 | 50 | 49 | 4.06 | 1.51 | 5.6*** | 10.0** |
| 14A | Forensic-Art Achievements | 51 | 54 | 50 | 52 | 1.18 | 1.24 | 4.2** | 2.2 |
| 14B | Math-Science Achievements | 52 | 54 | 50 | 50 | .34 | .62 | 5.4** | 13.9*** |
| 14C | 4H-Scouting Achievements | 50 | 51 | 50 | 50 | .28 | .49 | .2 | .2 |
| 15A | Mechanical Hand Tool Skills | 57 | 45 | 55 | 44 | .65 | .79 | 127.8*** | 1.9 |
| 15B | Mathematics-Science Skills | 59 | 55 | 53 | 49 | 2.49 | 1.70 | 34.9*** | 24.0*** |
| 15C | Handicraft-Music Skills | 47 | 53 | 46 | 54 | 1.93 | 1.20 | 41.1*** | .5 |
| 21 | Career Talks with Others | 51 | 52 | 50 | 52 | 3.20 | 1.19 | .6 | .0 |
| 22 | Job Search Activities | 49 | 50 | 49 | 51 | 2.64 | 1.63 | 1.2 | .2 |
| 26A | Importance of Salary-Security | 53 | 50 | 50 | 49 | 2.08 | 1.36 | 5.6*** | .7 |
| 26B | Importance of Job Relev-Indep | 53 | 53 | 51 | 51 | 3.41 | 2.00 | 2.5 | 3.7 |
| 26C | Importance of People in Job | 52 | 50 | 50 | 50 | 1.04 | .77 | 1.7 | .1 |
| 28-31 | Positive Science Views | 53 | 54 | 50 | 50 | .50 | .94 | 5.2** | 8.1** |
| 32 | Taxpayer Support of Science | 55 | 53 | 51 | 51 | 3.20 | 1.66 | 6.5*** | 5.2* |
| 36A | Science and Mechanics Reading | 57 | 52 | 53 | 47 | 1.04 | .99 | 35.7*** | 21.4*** |
| 36B | Fiction-Current Reading | 50 | 56 | 50 | 53 | 1.41 | 1.00 | 13.9*** | 5.2* |
| 37A | HS Teacher Encouragement | 52 | 50 | 49 | 52 | 2.81 | 1.69 | 2.5 | 1.3 |
| 37B | HS Teacher Advice | 50 | 49 | 51 | 49 | .98 | 1.06 | 1.3 | .1 |
| 37C | HS Teacher Disinterest | 50 | 50 | 50 | 49 | .52 | .76 | .7 | .6 |
| 38A | Negative Women Role Attitude | 51 | 46 | 52 | 47 | 1.18 | 1.13 | 19.8*** | 2.8 |
| 38B | Positive Women in Science Att | 49 | 56 | 48 | 54 | 3.65 | 1.81 | 25.7*** | 4.8* |

[1] Only part of the items used.

[2] The Standard Score Mean = 50 and Standard Deviation = 10 for total group on all variables.

[3] F value based on Single Classification Analysis of Variance of 4 Group Means with 3 and 719 degrees of freedom and F value for the 2 Group (Women Only) Mean Analysis of Variance with 1 and 404 degrees of freedom.

* p > .05; ** p > .01; *** p > .001

TABLE D2

STANDARD SCORE MEANS FOR COLLEGE AND NON-COLLEGE BOUND HIGH SCHOOL MALE AND FEMALE SENIORS EXPECTING TO HAVE SCIENCE CAREERS AND NON-SCIENCE CAREERS AND RAW SCORE MEANS AND STANDARD DEVIATION FOR COLLEGE AND NON-COLLEGE BOUND SENIORS

| ITEM NO. | VARIABLES | STANDARD SCORE GROUP MEAN SCIENCE M | SCIENCE F | NON-SCIENCE M | NON-SCIENCE F | RAW SCORE[2] TOTAL MEAN | TOTAL SD | F-VALUES[3] 4-GROUP | F-VALUES[3] 2-GROUP |
|---|---|---|---|---|---|---|---|---|---|
| 04 | High School Grades | 55 | 57 | 47 | 50 | 2.70 | .70 | 38.5*** | 31.7*** |
| 08 | Father Education Level | 55 | 55 | 49 | 49 | 2.68 | 1.60 | 24.1*** | 29.9*** |
| 09 | Mother Education Level | 54 | 53 | 50 | 49 | 2.53 | 1.40 | 15.0*** | 11.7*** |
| 10 | Expected Education Level | 59 | 58 | 49 | 48 | 4.22 | 1.37 | 69.5*** | 67.4*** |
| 16 | Planned Marriage Age | 53 | 53 | 52 | 48 | 2.99 | 1.07 | 25.1*** | 22.1*** |
| 18 | Women Marriage Vs. Career | 49 | 53 | 48 | 51 | 1.78 | .47 | 16.2*** | 3.6 |
| 19 | Counselor Education Talks | 52 | 54 | 49 | 50 | 2.48 | 1.00 | 9.9*** | 13.6*** |
| 20 | Counselor Occupation Talks | 49 | 52 | 50 | 50 | 1.99 | .90 | 1.1 | 1.3 |
| 33 | Approve Female Science Role | 50 | 52 | 48 | 51 | .94 | .23 | 11.3*** | .6 |
| 34 | Considered Science Career | 57 | 57 | 51 | 47 | .53 | .50 | 72.2*** | 84.0*** |
| 35 | Science Career Encouragement | 56 | 57 | 51 | 47 | .49 | .50 | 53.8*** | 76.8*** |
| 05 | No. New Science Courses | 54 | 52 | 50 | 49 | .85 | 1.08 | 13.5*** | 8.2** |
| 07A[1] | Mathematics-Science Honors | 56 | 55 | 50 | 48 | .39 | .79 | 34.6*** | 49.9*** |
| 07B | Language-Social Studies Honors | 50 | 55 | 50 | 50 | .32 | .64 | 8.2*** | 24.2*** |
| 11A | Mathematical-Science Ability | 59 | 58 | 50 | 48 | .70 | 1.76 | 85.0*** | 86.5*** |
| 11B | Language-Art Ability | 51 | 52 | 49 | 51 | .26 | 1.22 | 5.0** | 1.7 |
| 11C | Physical-Mechanical Ability | 55 | 51 | 53 | 46 | .53 | 1.22 | 77.3*** | 21.3*** |
| 12AA | Mathematics Courses Taken | 57 | 56 | 50 | 48 | .59 | 1.93 | 48.6*** | 44.5*** |
| 12AB | Science Courses Taken | 58 | 57 | 50 | 48 | .19 | 1.79 | 64.5*** | 70.6*** |
| 12AC | Humanities Courses Taken | 50 | 51 | 49 | 50 | 1.57 | 1.43 | 1.7 | .6 |
| 12AD | Mechanical Courses Taken | 54 | 45 | 56 | 45 | -1.13 | 1.24 | 157.8*** | .0 |
| 12AE | Business-Home Ec Courses Taken | 43 | 50 | 45 | 55 | .42 | 1.82 | 181.6*** | 29.9*** |
| 12AB | Mathematics Courses Liked | 57 | 55 | 49 | 49 | .18 | 1.99 | 35.7*** | 29.6*** |
| 12BB | Science Courses Liked | 57 | 54 | 49 | 49 | .37 | 1.72 | 34.2*** | 20.9*** |
| 12BC | Humanities Courses Liked | 48 | 52 | 47 | 52 | 1.36 | 1.83 | 28.9*** | .0 |
| 12BD | Mechanical Courses Liked | 55 | 48 | 54 | 46 | .08 | 1.18 | 81.6*** | 2.5 |
| 12BE | Business-Home Ec Courses Liked | 47 | 49 | 45 | 54 | .86 | 1.64 | 116.7*** | 33.0*** |
| 13 | Mech Devices-Books at Home | 53 | 53 | 50 | 49 | 4.06 | 1.51 | 7.8*** | 12.5*** |
| 14A | Forensic-Art Achievements | 51 | 54 | 48 | 51 | 1.18 | 1.24 | 14.8*** | 9.1** |
| 14B | Math-Science Achievements | 52 | 54 | 50 | 49 | .34 | .62 | 8.0*** | 19.8*** |
| 14C | 4H-Scouting Achievements | 50 | 51 | 50 | 50 | .28 | .49 | .2 | .1 |
| 15A | Mechanical Hand Tool Skills | 57 | 45 | 57 | 44 | .65 | .79 | 331.3*** | 2.4 |
| 15B | Mathematics-Science Skills | 59 | 55 | 51 | 47 | 2.49 | 1.70 | 74.9*** | 55.1*** |
| 15C | Handicraft-Music Skills | 47 | 53 | 45 | 54 | 1.93 | 1.20 | 87.8*** | .1 |
| 21 | Career Talks with Others | 51 | 52 | 48 | 51 | 3.20 | 1.19 | 7.8*** | .6 |
| 22 | Job Search Activities | 49 | 50 | 49 | 51 | 2.64 | 1.63 | 5.9*** | .5 |
| 26A | Importance of Salary-Security | 53 | 50 | 51 | 49 | 2.08 | 1.36 | 6.1*** | .3 |
| 26B | Importance of Job Relev-Indep | 53 | 53 | 49 | 50 | 3.41 | 2.00 | 7.3*** | 8.6** |
| 26C | Importance of People in Job | 52 | 50 | 49 | 50 | 1.04 | .77 | 3.1* | .0 |
| 28-31 | Positive Science Views | 53 | 54 | 49 | 50 | .50 | .94 | 8.8*** | 11.3*** |
| 32 | Taxpayer Support of Science | 55 | 53 | 50 | 49 | 3.20 | 1.66 | 15.9*** | 13.6*** |
| 36A | Science and Mechanics Reading | 57 | 52 | 53 | 46 | 1.04 | .99 | 76.6*** | 37.4*** |
| 36B | Fiction-Current Reading | 50 | 56 | 46 | 52 | 1.41 | 1.00 | 43.4*** | 14.3*** |
| 37A | HS Teacher Encouragement | 52 | 50 | 49 | 50 | 2.81 | 1.69 | 4.2** | .0 |
| 37B | HS Teacher Advice | 50 | 49 | 50 | 50 | .98 | 1.06 | .6 | 1.0 |
| 37C | HS Teacher Disinterest | 50 | 50 | 51 | 50 | .52 | .76 | 1.6 | .1 |
| 38A | Negative Women Role Attitude | 51 | 46 | 53 | 48 | 1.18 | 1.13 | 29.6*** | 8.5** |
| 38B | Positive Women in Science Att | 49 | 56 | 46 | 52 | 3.65 | 1.81 | 53.3*** | 11.7*** |

[1] Only part of the items used.

[2] The Standard Score Mean = 50 and Standard Deviation = 10 for total group on all variables.

[3] F value based on Single Classification Analysis of Variance of 4 Group Means with 3 and 1485 degrees of freedon and F value for the 2 Group (Women Only) Mean Analysis of Variance with 1 and 806 degrees of freedom.

* p > .05; ** p > .01; *** p > .001